

13  
INTERNATIONAL STANDARDS AND U.S. EXPORTS:  
THE KEY TO COMPETITIVENESS OR BARRIERS  
TO TRADE?

Y 4. SCI 2:103/166

International Standards and U.S. Ex...RING

BEFORE THE  
SUBCOMMITTEE ON  
TECHNOLOGY, ENVIRONMENT AND AVIATION  
OF THE  
COMMITTEE ON  
SCIENCE, SPACE, AND TECHNOLOGY  
U.S. HOUSE OF REPRESENTATIVES

ONE HUNDRED THIRD CONGRESS

SECOND SESSION

SEPTEMBER 22, 1994

[No. 166]

Printed for the use of the  
Committee on Science, Space, and Technology



U.S. GOVERNMENT PRINTING OFFICE  
WASHINGTON : 1994

88-061 CC

For sale by the U.S. Government Printing Office  
Superintendent of Documents, Congressional Sales Office, Washington, DC 20402

ISBN 0-16-046854-X

SEPTEMBER 22, 1994  
HE RECORD  
APR 11 1995  
BOSTON PUBLIC LIBRARY  
SUPERINTENDENT OF DOCUMENTS  
CONGRESSIONAL SALES OFFICE



B  
INTERNATIONAL STANDARDS AND U.S. EXPORTS:  
THE KEY TO COMPETITIVENESS OR BARRIERS  
TO TRADE?

---

Y 4. SCI 2:103/166

International Standards and U.S. Ex...RING

BEFORE THE  
SUBCOMMITTEE ON  
TECHNOLOGY, ENVIRONMENT AND AVIATION  
OF THE  
COMMITTEE ON  
SCIENCE, SPACE, AND TECHNOLOGY  
U.S. HOUSE OF REPRESENTATIVES  
ONE HUNDRED THIRD CONGRESS

SECOND SESSION

SEPTEMBER 22, 1994

[No. 166]

Printed for the use of the  
Committee on Science, Space, and Technology



U.S. GOVERNMENT PRINTING OFFICE  
WASHINGTON : 1994

88-061 CC

For sale by the U.S. Government Printing Office  
Superintendent of Documents, Congressional Sales Office, Washington, DC 20402  
ISBN 0-16-046854-X

APR 11 1995  
BOSTON PUBLIC LIBRARY  
MEDICAL DEPARTMENT

## COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY

GEORGE E. BROWN, Jr., California, *Chairman*

MARILYN LLOYD, Tennessee  
 DAN GLICKMAN, Kansas  
 HAROLD L. VOLKMER, Missouri  
 RALPH M. HALL, Texas  
 DAVE MCCURDY, Oklahoma  
 TIM VALENTINE, North Carolina  
 ROBERT G. TORRICELLI, New Jersey  
 RICK BOUCHER, Virginia  
 JAMES A. TRAFICANT, Jr., Ohio  
 JAMES A. HAYES, Louisiana  
 JOHN S. TANNER, Tennessee  
 PETE GEREN, Texas  
 JIM BACCHUS, Florida  
 TIM ROEMER, Indiana  
 ROBERT E. (BUD) CRAMER, Jr., Alabama  
 DICK SWETT, New Hampshire  
 JAMES A. BARCIA, Michigan  
 HERBERT C. KLEIN, New Jersey  
 ERIC FINGERHUT, Ohio  
 PAUL McHALE, Pennsylvania  
 JANE HARMAN, California  
 DON JOHNSON, Georgia  
 SAM COPPERSMITH, Arizona  
 ANNA G. ESHOO, California  
 JAY INSLEE, Washington  
 EDDIE BERNICE JOHNSON, Texas  
 DAVID MINGE, Minnesota  
 NATHAN DEAL, Georgia  
 ROBERT C. SCOTT, Virginia  
 XAVIER BECERRA, California  
 PETER W. BARCA, Wisconsin  
 BOBBY L. RUSH, Illinois

ROBERT S. WALKER, Pennsylvania\*  
 F. JAMES SENSENBRENNER, Jr., Wisconsin  
 SHERWOOD L. BOEHLERT, New York  
 TOM LEWIS, Florida  
 HARRIS W. FAWELL, Illinois  
 CONSTANCE A. MORELLA, Maryland  
 DANA ROHRABACHER, California  
 STEVEN H. SCHIFF, New Mexico  
 JOE BARTON, Texas  
 DICK ZIMMER, New Jersey  
 SAM JOHNSON, Texas  
 KEN CALVERT, California  
 MARTIN R. HOKE, Ohio  
 NICK SMITH, Michigan  
 EDWARD R. ROYCE, California  
 ROD GRAMS, Minnesota  
 JOHN LINDER, Georgia  
 PETER BLUTE, Massachusetts  
 JENNIFER DUNN, Washington  
 BILL BAKER, California  
 ROSCOE G. BARTLETT, Maryland  
 VERNON J. EHLERS, Michigan

ROBERT E. PALMER, *Chief of Staff*

MICHAEL RODEMEYER, *Chief Counsel*

KATHRYN HOLMES, *Administrator*

DAVID D. CLEMENT, *Republican Chief of Staff*

## SUBCOMMITTEE ON TECHNOLOGY, ENVIRONMENT AND AVIATION

TIM VALENTINE, North Carolina, *Chairman*

DAN GLICKMAN, Kansas  
 PETE GEREN, Texas  
 TIM ROEMER, Indiana  
 DICK SWETT, New Hampshire  
 HERBERT C. KLEIN, New Jersey  
 PAUL McHALE, Pennsylvania  
 JANE HARMAN, California  
 DON JOHNSON, Georgia  
 SAM COPPERSMITH, Arizona  
 ANNA G. ESHOO, California  
 JAY INSLEE, Washington  
 E. B. JOHNSON, Texas  
 DAVID MINGE, Minnesota  
 NATHAN DEAL, Georgia  
 XAVIER BECERRA, California  
 ROBERT G. TORRICELLI, New Jersey  
 JIM BACCHUS, Florida  
 PETER W. BARCA, Wisconsin

TOM LEWIS, Florida  
 CONSTANCE A. MORELLA, Maryland  
 KEN CALVERT, California  
 NICK SMITH, Michigan  
 ROD GRAMS, Minnesota  
 JOHN LINDER, Georgia  
 PETER BLUTE, Massachusetts  
 ROSCOE G. BARTLETT, Maryland  
 DANA ROHRABACHER, California  
 DICK ZIMMER, New Jersey  
 MARTIN R. HOKE, Ohio  
 EDWARD ROYCE, California

\*Ranking Republican Member.

# CONTENTS

## WITNESSES

September 22, 1994:

Henry Line, Director, Global Products Standards, AMP Inc., Stephen Oksala, Director, Corporate Standards, UNISYS Corp.; Belinda Collins, Director, Office of Standards Services, NIST; Richard G. Meier, Deputy Assistant, U.S. Trade Representative for GATT Affairs; Hon. Karl Hausker, Deputy Assistant Administrator, Office of Policy, Planning, and Evaluation, EPA; and Sergio Mazza, President, American National Standards Institute .....	3
---	---

## APPENDIX

Responses to questions of Chairman Tim Valentine from Stephen P. Oksala, Director, Corporate Standards, UNISYS Corp., Blue Bell, PA .....	108
Responses to questions of Chairman Tim Valentine from Henry Line, Director, Global Products Standards, AMP Inc .....	112
Statement of American Forest and Paper Association submitted by Sarah M. Hildebrand, Director, Legislative Affairs .....	115
Letter and response to questions for Dr. Belinda Collins, Acting Director, Office of Standards Service, NIST, Department of Commerce .....	124
Response of Henry Line, Director, Global Product Standards, AMP Inc., to question by Congressman Robert Walker .....	129
Responses to questions of the Hon. Tim Valentine from Karl Hausker, Deputy Assistant Administrator, Office of Policy, Planning and Evaluation, EPA .....	131
Responses to questions from Mr. Sergio Mazza, President, American National Standards Institute .....	134



## INTERNATIONAL STANDARDS AND U.S. EXPORTS: THE KEY TO COMPETITIVENESS OR BARRIERS TO TRADE?

---

THURSDAY, SEPTEMBER 22, 1994

HOUSE OF REPRESENTATIVES, COMMITTEE ON SCIENCE,  
SPACE, AND TECHNOLOGY, SUBCOMMITTEE ON TECHNOLOGY, ENVIRONMENT AND AVIATION,

*Washington, D.C.*

The subcommittee met, pursuant to call, at 9:35 a.m. in Room 2325, Rayburn House Office Building, Hon. Tim Valentine [chairman of the subcommittee] presiding.

Mr. VALENTINE. We will get started, ladies and gentlemen.

I think a word of explanation is in order. We see a lot of vacant seats here. I say this because many of you, I think this is your first experience in testifying before one of these terrible House subcommittees, and it is not unusual for there to be some empty seats. I'm sure we will be joined by Mr. Bob Walker, the distinguished Member from Pennsylvania, who is the ranking Republican on the full Science Committee, and others. It, I think, may be appropriate to bear in mind that all Members have a lot of demands on their time simultaneously.

Those of you who are here for the first time, I want to apologize for the fact that the television cameras which usually attend our meetings because they are usually so dramatic and newsworthy are not here today; they will be joining later. This is one of perhaps maybe a dozen or so subcommittees that are meeting today as we speak in this building and other buildings where there will be no testimony with respect to sex or violence or revelations of misconduct, real or imaginary, on the part of Members of Congress, staff or others. Hence, we don't attract much attention. We just, I like to think, go about the work of discharging the responsibilities that the people's house are really all about.

So with that sermon, those of you who weren't listening carefully enough, we will send you a copy of it, and if you would read it and initial it and have it notarized and send it back, we'd appreciate it.

The United States has a unique consensus-based, industry-led, voluntary standard system which has for over 100 years met our domestic standards requirements quite well. It is a good system that has largely contributed to U.S. competitiveness, health, public welfare, safety, and the preservation of the environment.

However, we are no longer the world's leader in all economic sectors. Many of our products used to set de facto global standards by



virtue of the fact that they were dominant in those markets. Now we are learning to compete among equals, trade rules have changed, and we must learn to use all the tools that we have at our disposal, such as standards and conformity assessment, to enhance exports and national competitiveness. Given this new landscape, we must revisit the way that we set standards in this country. We must become international players and learn to use standards as a trade tool to open up large markets for our products.

But how do we accomplish this without sacrificing our environment or compromising the safety and health of our consumers? Perhaps a question to ask is, how do we take trade into consideration when we are setting standards policy?

While we recognize that the standards role for the Government in the United States is substantially different from that of our trading partners, Federal agencies are major players in the U.S. voluntary standards system as users of standards, as writers, as regulators and educators. The challenge is to integrate effectively the Government and private sector resources in the voluntary standards system and to do this in a way that preserves the U.S. private industry-led lead and protects the public good.

As chairman of this subcommittee, I have carefully followed the evolution of and actively supported U.S. voluntary standards and conformity assessments over the years. As you may remember, in 1992 we commissioned the National Research Council to study international standards conformity and U.S. trade policy. This study, which we expect to receive perhaps as early as February next year, will make recommendations on this important matter. It is in the spirit of cooperation that we invite you to participate in this hearing and help us develop a strategy that effectively uses private resources and strengthens the U.S. international competitiveness advantage in the standards arena. In other words, we don't come with any preconceived ideas about this complicated subject.

We are happy to welcome our distinguished panel of experts which consists of Mr. Henry Line from AMP, Incorporated, and Mr. Stephen Oksala, Unisys Corporation, both from the private sector, who will tell us industry's views on standards and their relative importance. We have also Dr. Belinda Collins, who is director from the National Institute of Standards and Technology, and Mr. Richard G. Meier from the Office of U.S. Trade Representative, and the Honorable Dr. Karl Hausker from the U.S. Environmental Protection Agency as our Government witnesses. And last but certainly not least, we have Mr. Sergio Mazza, who is president of the American National Standards Institute, who will conclude the hearing for us with some final insights.

And to those of you whose names I mispronounced, I apologize and confess to you that my own name is Itimous Thaddeus Valentine, Junior. So you can see why I operate under the trade name of Tim. So with a name like that I'm entitled to certain latitude in pronunciation of names.

When Mr. Walker comes we will recognize him, but pending that we will proceed with your testimony. But excuse me just one minute.

[Pause.]



So we will proceed. Let me say before we do that, that the prepared statements which have been submitted to us by each of you will appear in the record as submitted, and so I would ask you to please summarize.

I would also like to say in advance that we will have, time permitting, some questions, and it might very well be that we do not have the opportunity to ask all the questions that we might have, and indeed some members who are not present might have questions, so we would ask you if you would accommodate us by giving answers to questions submitted after you leave here, within reason.

So, Mr. Line, we are ready to hear from you, sir.

**STATEMENTS OF HENRY LINE, DIRECTOR, GLOBAL PRODUCTS STANDARDS, AMP INCORPORATED; STEPHEN OKSALA, DIRECTOR, CORPORATE STANDARDS, UNISYS CORPORATION; BELINDA COLLINS, DIRECTOR, OFFICE OF STANDARDS SERVICES, NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY; RICHARD G. MEIER, DEPUTY ASSISTANT, U.S. TRADE REPRESENTATIVE FOR GATT AFFAIRS; HON. KARL HAUSKER, DEPUTY ASSISTANT ADMINISTRATOR, OFFICE OF POLICY, PLANNING, AND EVALUATION, U.S. ENVIRONMENTAL PROTECTION AGENCY; AND SERGIO MAZZA, PRESIDENT, AMERICAN NATIONAL STANDARDS INSTITUTE**

Mr. LINE. Mr. Chairman, members of the committee, I want to thank you for giving AMP the opportunity to present our views on this very timely subject. Before beginning my remarks, however, I must thank the subcommittee and its dedicated staff for their hard work and support. In recent years I have had the opportunity to hear a number of addresses by you, sir, on the subject of standards, and on each occasion I came away with the feeling that your committee understands and generally shares our views on the issue. I think it important to U.S. competitiveness that the momentum generated by these fine efforts on behalf of the U.S. voluntary standards system continue. Thank you all very much.

AMP has been closely involved with standards and their development since our founding in 1941. We believe that standards are important not just to AMP's business but to our Nation's ability to access global markets. It is our opinion that the U.S. system for standards development is sound, but like any system, especially those that must address the needs of a broad and growing constituency, it can be improved. We believe that a significantly enhanced relationship between the private and public sectors will provide the vehicle for ensuring continuous improvement of the process.

To understand why AMP invests in standards development as we do, it is important that I tell you a few things about our company. AMP is the world leader in electrical/electronic connection devices with sales in 1993 of nearly \$3.5 billion. We ranked 144th in Fortune's 500 list. AMP invests heavily in research, development, and engineering nearly 12 percent of our sales in 1993 and over \$3 billion throughout the last 10 years. Partly for this reason, in 1993 AMP ranked 20th among U.S. corporations and 50th worldwide in the number of patents granted.

The importance of standards to AMP and in fact all high-tech companies is closely related to investment in RD&E. Two ways to

illustrate this are shown in the first two figures of our written statement, and those are the two figures you see in large format to your left at the end of the room. They are more than just pretty pictures.

[The charts follow:]

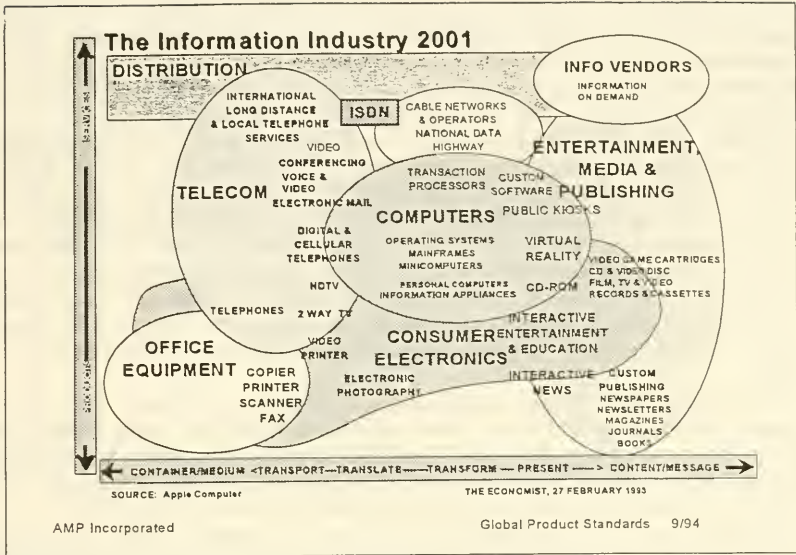


Figure 1

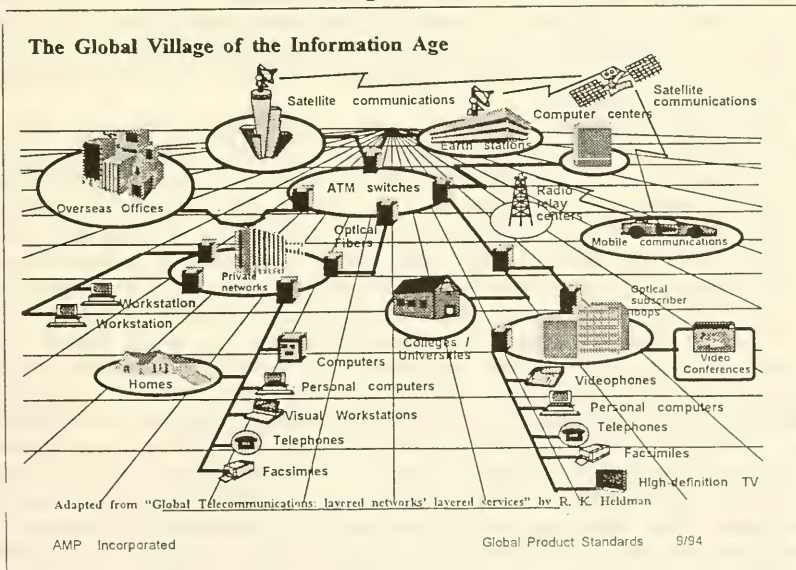


Figure 2

Mr. LINE. Figure 1, the one on the left, is a conceptualization of the information industry as it is expected to evolve in just a few years. It was reported recently in the Economist magazine that by the year 2000 that consumer electronics, television, computer, telecommunication, entertainment, and news industries will have become one single market worth \$3.5 trillion annually.

Figure two, the one on the right, is a model of the telecommunications infrastructure that will soon be a reality, and in fact already it is possible for an individual to communicate with someone else located almost anywhere else in the world instantaneously and with geographic and time zone transparency, and in fact even today it is possible for an individual in his car to communicate with his home to turn the microwave oven on or off, the air conditioning on when he comes home from work; it is already possible for people from their homes to communicate with libraries and with their offices.

The important thing to understand is that standards are the element common to both of these concepts. Without standards there could be no homogeneity in the information industry marketplace nor will there be a global information superhighway without standards to enable seamless communications around the world.

Critical too in these models are the connectors that will tie the many elements together. In fact, much of the enabling standardization for these models will focus on the devices from which AMP derives much of its revenue. Inasmuch as these hugely important networks are dependent upon connectors and connectors upon standards, it is clear why AMP chooses to participate in the development of their requirements.

For these reasons, several hundred AMP technical representatives serve on over 450 standards committees around the world, and I should add, too, that in 1993 AMP developed an eight-hour training program to prepare our experts for effective committee work. We are proud of the fact that, using our material as a foundation, that we are working with ANSI to prepare a national training course to help improve U.S. competitiveness in these activities.

AMP shares the views generally held by industry that the U.S. voluntary consensus-based standards system is sound. Much of its strength derives from the fact that it is driven by market requirements and the requisites of due process. However, over the past several years changes in global politics and economics have pointed to a need for improvements. We believe that these inadequacies can and should be remedied within the framework of the current system. This work is well under way, but there is more that can be done. For example, strengthening the relationship between the private and public sectors will provide a major catalyst for addressing the new global urgencies in standards. To AMP it seems logical that the two principal focal points should be ANSI and the National Institute of Standards and Technology, NIST.

It is time that the Government recognize ANSI as the official U.S. representative to international nontreaty standards organizations and as overseer of the U.S. voluntary standards development system. We look to an empowered NIST as the gatekeeper between ANSI and the other Government agencies for standards issues to provide technical experts for domestic and international commit-

tees and to support the efforts of ANSI to take U.S. national standards to the global bodies. We are convinced that such a partnership, pooling the expertise that ANSI and NIST have in standards, will significantly enhance U.S. competitiveness in global and regional standards bodies. Our written statement lists some benefits that such a relationship would provide, and we are excited at the prospect that, with the will to do so, they all could become a reality.

Thank you again very much.

[The prepared statement of Mr. Line follows:]

Statement by AMP Incorporated  
to the U.S. Congress House of Representatives  
Subcommittee on Technology, Environment, and Aviation  
Hearing on International Standards and U.S. Exports:  
The Key to Competitiveness or Barriers to Trade?

SEPTEMBER 22, 1994  
RAYBURN HOUSE OFFICE BUILDING 2318

PRESENTED BY:

HENRY LINE  
DIRECTOR, GLOBAL PRODUCT STANDARDS



**INTERNATIONAL STANDARDS AND U.S. EXPORTS:  
THE KEY TO COMPETITIVENESS OR BARRIERS TO TRADE --  
THE PERSPECTIVE OF AMP INCORPORATED**

**INTRODUCTION**

Mr. Chairman, members of the Committee, my name is Henry Line and I am Director of Global Product Standards for AMP Incorporated. I want to thank you for giving us the opportunity to present our perspective on this very timely subject.

Before beginning my remarks, however, I would be remiss if I did not commend the subcommittee, and its capable and dedicated staff, for the hard work and support that has been given to the U.S. standards development system. In recent years I have had the opportunity to hear a number of addresses by Congressman Valentine on the subject of standards and after each one I came away with the feeling that his committee understands and generally shares our views on standards. I think it important to U.S. competitiveness that the momentum generated by these fine efforts on behalf of the U.S. voluntary standards system continue. Thank you all very much.

**COMPANY PROFILE**

The focus of my comments will be directed at AMP's perception of standards -- why we think they are important -- and our approach to global standards development. Because I believe it better to suggest solutions rather than tell you about problems, I will conclude by addressing some things that should be done to improve U.S. competitiveness in global standards making.

However, to help you understand why AMP has proceeded as we have, I think it important to tell you something about our company. AMP is the world leader in electrical/electronic connection devices and has an 18-19% market share in a \$17 to 19 billion market. Headquartered in Harrisburg, PA, it employs over 28,000 in 175 facilities in 36 countries. In the U.S. AMP has operations in 13 states. With \$3.45 billion in sales in 1993 AMP ranked 144<sup>th</sup> in sales in Fortune's 500 list and was 71<sup>st</sup> in net income.

A critical factor in AMP's success is its ongoing investment in research, development, and engineering which reached \$406 million in 1993, nearly 12% of sales, and surpassed \$3 billion in the last ten years. As a result of this investment, AMP is 20<sup>th</sup> among U.S. corporations and 50<sup>th</sup> worldwide in patents received in 1993. A recent study ranked AMP 24<sup>th</sup> in the world in "Technological Strength" based upon the number and importance of patents. Today AMP has over 3000 patents issued or pending in the U.S. and over 11,000 in 37 other countries. I should point out, also, that we diligently defend them when they are infringed.

Complementing AMP's intense focus on RD&E, especially in recent years, has been its participation in industry standards development committees around the world. Over half of our sales revenue is derived from products that conform to the requirements of industry standards. The remainder of this Statement will address why AMP believes standards are a critical factor in business success and describe some of the key features of our approach to standards development. It will conclude with some thoughts on how the process might be improved.

#### **THE STANDARDS IMPERATIVE -- STANDARDS AS CHANGE AGENTS**

There is an interesting dichotomy that can be made in assessing the role that standards play that especially highlights their importance. On the one hand, standards provide credibility, viability, and stability to emerging industries and technologies, but, they also can be viewed as agents of change. Their ability to accommodate change in an orderly fashion is an invaluable tool that both allows and encourages industries to implement next generation advances in technology. Standards obviate the need to "reinvent the wheel."

Standards serve as agents for change in other areas as well. Consider the following list of external influences on business in today's environment.

#### **CRITICAL EXTERNAL BUSINESS FACTORS**

- Technology as a prime driver of change:
  - *Materials,*
  - *Products,*
  - *Biotechnology,*

- *Merging of computers and communications, and*
  - *Pervasiveness of electronics into all aspects of modern life;*
- Increased cooperation among nations:
  - *European Economic Community (EEC),\**
  - *General Agreement on Tariffs and Trade (GATT),*
  - *North American Free Trade Agreement (NAFTA),*
  - *United Nations... International Telecommunication Union, and*
  - *G7 nations on economic and monetary policies;*
- Rapidly rising volume of world trade and emergence of large new geographic markets;
- Increased cooperation among companies:
  - *Strategic alliances and joint ventures,*
  - *Licensing/cross licensing, and*
  - *More outsourcing and subcontracting;*
- Environmental and other regulatory activities:
  - *Clean air/water mandates,*
  - *Use of recycled materials,*
  - *Hazardous materials, and*
  - *Safety and health issues;*
- Global Product Standards:
  - *National,*
  - *Regional, and*
  - *International;*
- Globalization of business:
  - *Rapid transfer of capital, assets and people,*
  - *Global sourcing,*
  - *Global marketing approach, and*
  - *Multinational companies' activities becoming truly globally integrated;*
- Quality certifications and awards: ISO 9000, MRP II Class A certification, Baldrige competition, state awards, etc;
- Global communications as a new competitive arena:
  - *Architects, owners and contractors,*
  - *Distributors, systems integrators and installers,*
  - *Telephone and cable companies,*
  - *Original equipment manufacturers, etc; with all of these users... Specifying, supplying and installing:*
    - Components
    - Subsystems and Systems

---

\* AMP recognizes that standards work is oppressive in the use of acronyms. Accordingly, a list of those used in this statement is included at the end.

- Networks: local area networks, metropolitan area networks, wide area networks, wireless;
- Government spending and tax policies as incentives and disincentives to growth;
- Increasing use of "industrial policies" to link industry, government, financial and academic efforts; and
- Rapidly changing geopolitical and economic environments.

The element common to all but very few of these factors is standards.

For example, standards are the prime instrument to the realization of the free movement of inhabitants, products, capital and services in the EC. The role of standards in effecting strategic alliances and global business practices is also self-evident, and countless other examples could be listed.

In some way AMP is influenced by all these external factors. Quite obviously if any one company could influence any of the elements to the benefit of its constituents, it likely would. However, companies acting alone are ineffective in getting their voices heard in these areas. On the other hand, companies, by joining together in standards development work can make a difference in the evolution of these factors. This is one important reason for AMP's involvement in global standards committees. As changes in this environment occur, participating in, or at least closely following, these events gives a company the maximum opportunity to plan, as well as to react, hopefully finding competitive advantage.

Closely related to this list of external factors is another phenomenon that directly impacts how AMP, and all other companies for that matter, will do business.

In 1990, the International Organization for Standardization and the International Electrotechnical Commission (ISO/IEC) published a joint study entitled "A Vision for the Future: Standards Needs for Emerging Technologies." It was a forecast of international standardization needs based on a comprehensive global survey covering 12 major technology sectors. There were

2,744 respondents from 40 countries. Consider the following list of areas identified in this report as requiring new standards, either then or in the immediate future. Keep in mind that this is only a partial list of the areas addressed by the report. What is important to understand is that in each of these areas, the standards development process is well under way.

**SOME KEY AREAS CURRENTLY BEING ADDRESSED BY STANDARDS UNDER DEVELOPMENT**

- Components
- Factory Automation
- Home Automation
- Electronic Packaging
- Computer Buses
- Networking -- Local Area, Wide Area
- Campus, Metropolitan...
- Telecommunications -- ISDN/BISDN
- Optical Fiber Communication...
- Superconductivity
- Fiber Optic Devices
- Erasable, Rewritable Optical Disks
- Memory Cards
- Image Data Processing
- Semiconductors
- Printed Circuit Boards
- Cables
- Medical Electronics/Health Services
- Automotive
- Aircraft
- Trains
- Ships

As you can well imagine, each of these areas is important to AMP's new product development activities and, we would venture to say, for most high technology companies in the U.S. as well. So today's new reality, for even the most high-tech companies, is that the marketplace is already demanding standards, regardless of how technically advanced the area seems to be.

The point of this discussion is that standards are at the heart of the changes taking place external to the company and will certainly be drivers of the changes that must take place internally as well. To ignore or to choose not to participate in the standards development work that is defining the direction and shape of new implementations of technology risks abdicating key new product

decisions to competition. For AMP, this means conceding these decisions to other companies, for the U.S., to other nations.

### THE ANTICIPATORY NATURE OF STANDARDS AND THE STANDARDS IMPERATIVE

If we take this argument one step further, there is a fundamental characteristic of today's emerging standards that underscores the reason AMP places so much emphasis on this activity. Standards in our business today often *precede* the products and systems they describe. Because of the complexity and cost of much of today's equipment, the users of these products are demanding standards to assure interconnectability before they will purchase new systems. This is a key imperative imposed by standards on business that will be discussed further in the paragraphs that follow.

This requirement is a distinct change from our experience of the past. In the years following AMP's founding in 1941, our standards activities were largely focused on MIL-Specs and MIL-Standards. These documents, developed by and for the government, were vehicles to help government and defense agencies purchase products. Frequently, these specifications were developed years after the product first appeared in the marketplace. As purchasing documents, they rigorously described the product, focusing on form, fit and function.

While these areas remain important to us, the impact of standards on our business changed dramatically in the 1980s with the advent of what author John Naisbitt described in Megatrends as the "Information Society." This phenomenon, more than any other single event, reset, ten years or so ago, the focus of AMP's standards-making work. The coming together of data systems and telecommunications into what we know today as **information technology** spawned a proliferation of very expensive electronic equipment. Unfortunately, the purchasers of these devices quickly found that the equipment often couldn't be interconnected. The market reaction was swift. Users who wanted computer and telecommunications systems tailored to their requirements and didn't want to be dependent upon only one supplier demanded that components from different manufacturers be interconnectable. The only way to ensure this was



through product standards. As a result, a whole new discipline was born, one that strikes at the very heart of AMP's business and, in fact, all businesses.

The anticipatory nature of today's standards forcefully underscores the impact of standards on a business. Because of the complexity and cost of many of today's information technology products, both developers and purchasers are now demanding standards that assure interconnectability *before* the products are taken to market. One example of how we apply this in practice is described in the May 2, 1994 issue of Business Week which contains a brief description of AMP's joint program with Duracell to develop global standards for next generation batteries and battery interconnections. Planning new products without regard to applicable standards, especially those under development, is at best a risky approach.

For companies like AMP, specialists in high technology interconnection systems, the directions taken by information technology are especially important. Closely allied to this is the emergence of the global information infrastructure. In many ways the conceptualizations of the information technology "industry" and the information infrastructure are identical. Why this is so, and underscoring the importance of each to AMP, is quickly understood by a quick review of the graphical representation of each shown in Figures 1 and 2 which are contained in the Appendices.

Figure 1 is a conceptualization of the information industry in the year 2001 as envisioned by Harvard University and published in the Economist magazine. John Sculley, at Apple Computer at the time of the study, predicted that by the year 2000 the consumer-electronics, television, telecommunication, entertainment and news industries will have become one single market worth \$3.5 trillion annually. What must be understood, however, is that none of it will happen without standards to assure the interconnectability and interoperability of the various industry segments shown in the graphic -- standards critical to AMP as we are a major supplier of the interconnections that will be required..

Similarly, it is true that standards are at the heart of the communications infrastructure shown in Figure 2. Already today it is possible for an individual to

communicate with someone else located almost anywhere else in the world -- instantaneously and with geographic and time zone transparency -- a global interconnectability made possible by standards. It would be quite difficult to illustrate with more impact why AMP is involved in the standards developments that touch upon our business -- and why the competition in these developments is so fierce. With this said, it may help explain why AMP has taken the directions we have in strategic standards management that will be described in the following pages.

## **STRATEGIC STANDARDS MANAGEMENT**

### **Horizontal Standards Work**

To begin the discussion of strategic standardization in AMP, I'll start with some activities that don't relate directly to the development of product standards but, nonetheless, are of great concern to us. We refer to them as "horizontal" standards activities because they cross many product and industry boundaries. We have taken a much greater interest in this work lately because, while the results of these activities seem to start out as voluntary standards, they often end up taking the form of regulations.

Three specific activities are of special interest to us:

- Global quality standards development;
- Global environmental requirements being advanced, especially by Europe; and
- The intellectual property provisions being advanced by the European Telecommunications Standards Institute (ETSI).

Most organizations are in the process of incorporating ISO 9000 -- the "quality" system standard -- in their facilities and benefiting from it. At AMP all major production systems around the world are now certified. But some questions about ISO 9000 regarding its scope, cost, and relevance still linger.

Promulgated in large measure by Europe, many believe the U.S. was "asleep at the switch" during the development and implementation of this standard. Unfortunately, few American companies voiced their concerns at the

global implementation meetings. We could have spoken louder and more forcefully on what the form and function of a truly global quality system standard should be. However, the ISO quality certification process is currently under review, and active participation by interested companies and organizations should result in streamlined procedures that improve quality while reducing time and costs. AMP is participating in this work principally through our involvement with the U.S. Technical Advisory Group to ISO TC176 on Quality Management and Quality Assurance.

U.S. industry also must participate in developing environmental management requirements for product and process standards. Already underway, this work has a vast scope and global coverage. One way of describing it is shown in Figure 3. Companies must work together to assure that when environmental requirements are added to new product standards -- such as the ease of disassembly, recyclability, and energy consumption -- the requirements are based on good science and sound principles that benefit the environment. As it stands now, the potential implementation costs of such requirements could make those of ISO 9000 pale in comparison. It need not be so and AMP will continue its work in U.S. technical advisory groups, ISO TC207, and with several other industry associations to help bring wisdom to the process of defining these requirements.

The cumbersome and potentially onerous global provisions for intellectual property that have been advanced by the European Telecommunications Standards Institute (ETSI) in its IPR Undertaking are well known to those working in information technology standardization. Many have called the ETSI undertaking a "technology grab" owing to its compulsory licensing and anticompetitive features. At this writing, it has just been announced that the ETSI General Assembly has abandoned the undertaking and that ETSI members will not be asked to sign it. It seems clear that the chorus of protests from American and some European companies and from U.S. industry associations and government representatives were instrumental in bringing about this outcome.

An important message here is the effectiveness that different constituencies sharing common interests can have in influencing such controversies – particularly when the public and private sectors join in the fray. While this battle is not yet won – the ETSI Policy Document has yet to be redrafted – the tools are in place to maintain a watchful eye throughout the process. AMP as a member of ETSI through our Holland company protested the Undertaking in writing to both ETSI and the EEC, and is working closely in the U.S. with the many industry associations in which we are active to bring this matter to proper resolution.

### **Product Standards Development**

Following is a brief overview of AMP's approach to the industry product standards development process. It is highly improbable in today's markets that a supplier can achieve dominance with a major product that flies in the face of industry standards. The lesson learned by the Sony Corporation with their BetaMax system is an ideal example of what can happen if a company attempts to go it alone. As a consequence of Sony's rejection of standardization, Panasonic's VHS system became the clear market standard. (For a brief but excellent description of this, see Forbes magazine, January 20, 1992, page 82.) This example highlights one reason why AMP intends to make its voice heard in those key industry committees that develop standards which set requirements for products we make. To not do so risks abdicating key new product decisions to competition.

To assure that we effectively carry this out, we have included standards considerations in the strategic plans of every major AMP business unit around the world. We also make sure that our standards people are in attendance during the annual presentation of these strategic plans to AMP executive management.

This process helps assure excellent interaction between our standards professionals and the rest of the company, most notably the engineering

community. It also helps us identify the committees in which we should be working and the opportunities they present us.

Effective committee work depends upon continuous and close cooperation between our corporate staff of over two dozen standards professionals and our engineering and technical communities consisting of over 2000 people with technical degrees. Our standards staff identifies the committees and their needs and provides our technical experts training on how to participate effectively and legally in them.

It is these standards-making professionals who are responsible for bringing together all within AMP who need to be part of the standards strategy sessions wherein we jointly chart our course for satisfying committee requirements. With the direction and guidance of our standards experts, it is our engineers who represent the technical merits of AMP's products during the intense committee deliberations that ultimately determine which product best meets the needs of the marketplace.

Through these in-house "partnerships" of the standards professionals with their technical counterparts, AMP participates in about 450 standards-setting bodies throughout the world. These include both ANSI-accredited committees and industry consortia that are addressing the type of products manufactured by AMP.

In the United States, AMP participates in over two hundred U.S. standards development committees and in over 100 global committees most of which are under the aegis of ISO and the IEC. Figure 4 shows the key umbrella organizations in which AMP is active. In addition, AMP is active in other committees such as those of ASTM and routinely use their standards in our facilities. For example, ASTM standards are used to define the minimum requirements for all of AMP's test procedures and raw material specifications. For this reason, AMP purchases a complete set of ASTM standards each year. In addition, we subscribe to ASTM standards through another corporate level department, receiving them in CD-ROM format.

In our standards development work we are not oblivious of the requirement that our representatives be properly trained in how to do committee work effectively and how to be assiduously correct legally. To this end the AMP standards staff has assembled a comprehensive training manual to assist those who represent us. Our eight-hour standards training course covers such things as the importance of standards to our business, how to prepare for and follow-up after meetings, Robert's Rules of Order, and the things to avoid from an anti-trust perspective.

So far we've used this manual in training classes involving more than 100 people from five countries. We are flattered that the American National Standards Institute (ANSI) has asked AMP for permission to use our material as a basis for a national training program to help improve the global competitiveness of the U.S. standards development process. Throughout 1994, we have been working with ANSI on this program and feel confident that, by December, it will be ready for a trial class.

### **Global Coordination**

In recent years, AMP's most significant standards challenges have come from European and other regional organizations, such as CEN, CENELEC, and ETSI, the most important European standards development bodies. We have mentioned earlier the impact on global business of the quality system and environmental management schemes which were in large measure driven by Europe. Some still argue whether they were originally intended to be non-tariff barriers to trade directed at non-European companies. Clearly, the European Telecommunication Standards Institute IPR Undertaking was not in the best interest of U.S. technology innovators. Another example of Europe's understanding of the power of standards was described in an article in the May 23 issue of Business Week. It reports that European companies may be taking a sizable lead in mobile communications technology with second-generation digital systems based upon a single cellular standard, called Groupe Speciale Mobile (GSM). In fact, the U.S. Department of Commerce indicated in a recently published document that national standards are diminishing in importance to



international standards. Our experience within and without the U.S. supports this.

For these reasons, and to further our global objectives and those of our global customers, AMP formed its Global Working Group for Standards in 1991. It consists of at least one key individual from each of our global companies located in countries where standards-making activities are especially critical. To date, this group includes representatives from the U.S., Japan, Great Britain, France, Germany, Holland, Italy, and Spain. The purpose of this working group is to provide the leadership, focus, unity of purpose, and coordination of AMP's global standards programs.

This group has documented its plans in a comprehensive manual that is updated twice annually. With two global meetings a year, frequent global teleconferences and an effective electronic communications network in place, the Global Working Group is making great progress.

#### PARTICIPATION IN INDUSTRY ASSOCIATIONS AND LIAISONS WITH GOVERNMENTAL AGENCIES

AMP recognizes that it alone cannot dictate that our products are those selected by committees for their emerging standards. Only the marketplace -- our customers -- through open committee deliberations to arrive at the product that best meets its requirements can do this. In fact, this process is one of the great strengths of the U.S. voluntary standards development process. These committees are frequently under the aegis of industry associations and, in most instances, are accredited by the American National Standards Institute. They serve well the U.S. standards being developed for their industry sectors and the U.S. standards development process in general. AMP is active in several of these associations and one of our executives sits on the ANSI Board and serves in a number of its Board committees. We are particularly supportive of the work being done by the ANSI Company Member Council Executive Committee, especially its efforts to promote throughout U.S. industry the importance of strategic standardization. In 1993 AMP permitted a thorough study of our approach to standards work to be carried out during the ANSI-sponsored

national benchmarking program. Also, AMP is active in ANSI's recently formed Information Infrastructure Standards Panel (IISP) and is highly supportive of its objectives.

Finally, AMP's Global Product Standards staff works quite closely with several agencies of the U.S. Government including DoD agencies, the FCC, the Department of State (ITU), Consumer Product Safety Commission, the Rural Electrification Agency, and the National Institute of Standards and Technology (NIST).

#### COMMUNICATIONS

Doing the right things is of little benefit if those who need to be aware of them aren't informed. A successful standards program requires an abundance of communication. To this end, the monthly reports of our Global Product Standards department are circulated globally to more than 300 employees with regular electronic communication of key events to even more. The department distributes special notices called Standards Alerts to a broad audience, and has made a number of standards-related electronic databases available to over 8000 of our people around the world.

What proved to be especially effective in "getting the message out" was the unique Global Standards Day Workshop that AMP held in 1993. Over 250 of our people from throughout the world attended. Among those who made presentations at this highly successful forum were members of AMP's executive management, the president of the American National Standards Institute, and both the president and secretary general of the IEC. In addition, our standards department prepared over 600 pages of information that acquainted attendees with current standards activities important to their product and industry assignments.

One of the things we've learned is that we cannot communicate too much, especially with those outside our professional staff. For most of them, standards work is in addition to their regular assignments. Accordingly, the standards necessities sometimes can get overlooked. So communication -- globally -- needs to be stressed, and those responsible for doing so must be equipped with

the tools they need to carry it out as easily and effectively as possible. Two of the tools we're currently working on is a broader implementation of full motion video conferencing. We think this will not only encourage more global standards meetings, but will be a big cost cutter as well. And we have recently equipped all of our traveling managers with sophisticated portable computers with fax-modem capabilities.

### SUMMARY

Before delving into some thoughts about how the U.S. standards-making process can be made even better, it might be well to summarize some of the key points of our program.

- For a standards program to work well, it needs the support of executive management. AMP's program is blessed in this regard. It is a Corporate level program that enjoys the full support of W. J. Hudson, AMP President and CEO. Mr. Hudson was the industry keynote speaker at ANSI's 1994 Public Conference and also the author of "Strategic Standardization," an article that will appear in the October 1994 issue of Chief Executive magazine.
- Standards are a market-driven phenomenon which create new markets for the products they describe. Suppliers alone cannot assure that a particular product will appear in a new standard. Only by working closely with the users of that product -- in and out of the committees -- can this be done.
- We believe that standards hasten the implementation of new technology. Because the marketplace abhors standards that don't meet market requirements, and because today's standards often precede the products they describe, the latest advances in technology are increasingly embraced in the new requirements -- that is, form, fit, and function, but not exact design features. There is ample opportunity for manufacturers to differentiate their products that conform to industry standards through superior implementation of technology.
- Owners of proprietary products should not view standards as a threat. Standards committees are permitted to select patented products, provided the patent holder agrees to grant fair, reasonable and nondiscriminatory licenses. If, however, the patent holder refuses to license, they likely will find themselves competing against the product selected by the committee. So there's a powerful argument to suggest that the best way to protect and exploit a company's technology is to advance it in the standards development committees.
- It must be mentioned that standards-making can be expensive. Obviously, the out-of-pocket costs incurred, largely travel related, are a function of the number of committee meetings attended. It also must be understood that

committee participation is a long-term commitment, and regular attendance at the meetings is a requirement. Most committees look with disdain upon members who show up only at the meetings when a critical vote is to be taken. In fact, in many instances, members can lose voting rights if they fail to satisfy minimum attendance requirements.

- At AMP we look upon standards-making as an important part of the individual's professional development and recognize our full-time standards experts as career professionals. We call upon only our most qualified people to take part in these activities.
- Because voluntary standards are not an end in themselves, they must be a part of the company's global market strategy and new product development efforts. Standards-making activities are directed at the new product requirements of our customers, who are rapidly becoming more global. For these reasons, AMP's Global Product Standards department reports to the corporate vice president of Global Marketing.
- It must be pointed out that those companies who participate in standards have a choice. For any given committee, they can choose to participate in the many meetings that finally lead to a new standard or they can choose to follow the work and implement the standard when it has been completed. One option is chosen as often as another. However, for all the above reasons, and for many others, we've observed that companies who either are, or would aspire to be market leaders, usually are at the vanguard of standards development work. What's important is that a company chooses a level of participation that best meets its needs and resources and aggressively pursues its chosen approach.

The voluntary, consensus-based U.S. system of standards development is sound. However, there are a number of areas where it can be improved. These have largely been brought about by the urgencies of global politics and economics. Owing to these dynamics, the relationship between the U.S. government and the private sector standards developers needs to be strengthened. Some thoughts on how to accomplish this will now be discussed.

#### **IMPROVING THE PROCESS**

AMP shares the view which we believe is the predominant view generally held by industry — that the U.S. voluntary and consensus standards making process is sound, but that it can be improved. That we believe it is sound is based upon the fact that the process is driven by market requirements. In the voluntary consensus system, standards emerge because technical

experts, governed by the requisites of due process, thrash out the details of a set of requirements until the product that best satisfies those requirements is defined. While perhaps a bit simplistic and idealistic, this scenario summarizes, in large measure, AMP's experiences in the many committees in which we participate. We believe that these are natural processes that respond to needs in a way that no form of central planning ever can.

The need to improve the system is driven in large measure by a number of factors that simply weren't present until recent years. These include the globalization of business, the emergence of highly competent off-shore competitors, improvements in communication, the increasing pace of new advances in technology, the growing complexity of government, demands for standards in areas previously unheard of (global quality and environment for example), and the identification of standards development and product certification as major business opportunities in and of themselves. As a consequence, the standards processes that have served our national interests so well, now need to be enhanced in order to more effectively respond to the new urgencies. In no way, it is AMP's opinion, should the current system be abandoned as the way to remedy its inadequacies. Furthermore, it is likely that a major overhaul isn't even necessary.

Nonetheless, while many of the issues involved do not lend themselves to quick or easy solutions in this paper, a number of recommendations do seem especially worthy of consideration.

First and foremost, the entire U.S. standards-development process will benefit from an enhanced relationship between the private and public sectors. To AMP it seems logical that the two principal focal points in the U.S. for addressing standards issues ought to be ANSI and NIST. Each has unique responsibilities in this regard, all of which are required by the process and for global competitiveness, but with those of one sector distinct and apart from the other.

We believe that the process will be served best when ANSI is recognized by the U.S. Government as the single organization to oversee and arbitrate disputes in the U.S. voluntary and consensus standards development system and, further, is recognized by the government as the official U.S. representative to international, non-treaty standards organizations. In addition, we believe that ANSI should serve as the principal resource for training the public, business, and government in standards and the standards-making process. We look to an empowered NIST to act as gatekeeper between ANSI and the other U.S. Government agencies for standards issues, to assure ongoing participation by Government experts on the ANSI Board and its governance committees, in U.S. Technical Advisory Groups, and in U.S. delegations to ISO and the IEC, and to aggressively support the efforts of ANSI to take U.S. national standards, with the force of ANSI accreditation behind them, into the global standards bodies.

An effective partnership between the private and public sectors will significantly enhance U.S. standards competitiveness in many ways. Among these are:

1. The U.S. will be viewed as speaking with one voice in international standards forums.
2. The U.S. will be better equipped for assuring that U.S. technology is that upon which new global standards are based.
3. The U.S. can speak with a louder voice on behalf of the implementation of international standards in all nations including the U.S. The standards that best break down barriers to trade are international standards.
4. The U.S. voice will be heard more loudly during the global debates on such matters as the attempted "technology grab," by the European Telecommunications Standards Institute, during the establishment of new global quality and environmental requirements, and the development of global mutual recognition agreements, and the like. On the issue of conformity assessment, the U.S. should speak in harmony on behalf of global acceptance of suppliers' declaration of conformance as regards performance of their products to requirements.



5. The U.S. government can better assure that the needs of industry are addressed by the standards requirements contained in treaties such as GATT and NAFTA.
6. A forum is created for more effectively resolving the vexing financial issues that more and more must be addressed by both government and ANSI.
7. A vehicle is established for providing more effective assistance to the lesser developed nations in their efforts to put standards systems in place.
8. A forum is established for addressing the extent to which U.S. antitrust laws unnecessarily impede the timely development of new standards. There is much that ANSI and NIST, working in close partnership, can do to speed up the process of standards development. Too often we hear that "a standard is what emerges if you wait long enough," and U.S. competitiveness suffers as a result of these delays. Perhaps a good first step would be to determine whether the Cooperative Research Act should be amended to better reflect industry needs vis-à-vis anti-trust concerns.
9. ANSI, with the support of the U.S. government, becomes a more effective vehicle for addressing - in an ongoing manner - future requirements of the U.S. standards development system.
10. Such a partnership would serve as a useful tool to identify requirements and provide justification for funding participation by government experts in the standards development committees around the world. This participation is and will continue to be needed.

While this list could be expanded, it is not the purpose of this Statement to do so. AMP hopes, in this Statement, that we have made it clear why standards are important to U.S. business, that it is AMP's opinion that the existing foundation for the U.S. standards development is sound, but needs to be improved, and that there are some very rational ways to do so.

AMP thanks you again for this opportunity to provide our perspective on this very important subject and puts itself at your disposal if we can be of further help.

### **Acronyms**

ANSI	American National Standards Institute
ASTM	American Society
BISDN	Broadband ISDN
CEN	European Committee for Normalization
CENELEC	European Committee for Electrotechnical Normalization
COPANT	Pan American Standards Conference
EEC	European Economic Community
ETSI	European Telecommunications Standards Institute
FCC	Federal Communications Commission
GATT	General Agreement on Tariffs and Trade
GSM	Groupe Speciale Mobile
IEC	International Electrotechnical Commission
IISP	Information Infrastructure Standards Panel
IPR	Intellectual Property Rights
ISDN	Integrated Services Digital Networks
ISO	International Organization for Standardization
ITU	International Telecommunication Union
MRP	Manufacturing Resource Planning
NAFTA	North American Free Trade Agreement
NIST	National Institute of Standards and Technology
PASC	Pacific Area Standards Congress
TC	Technical Committee

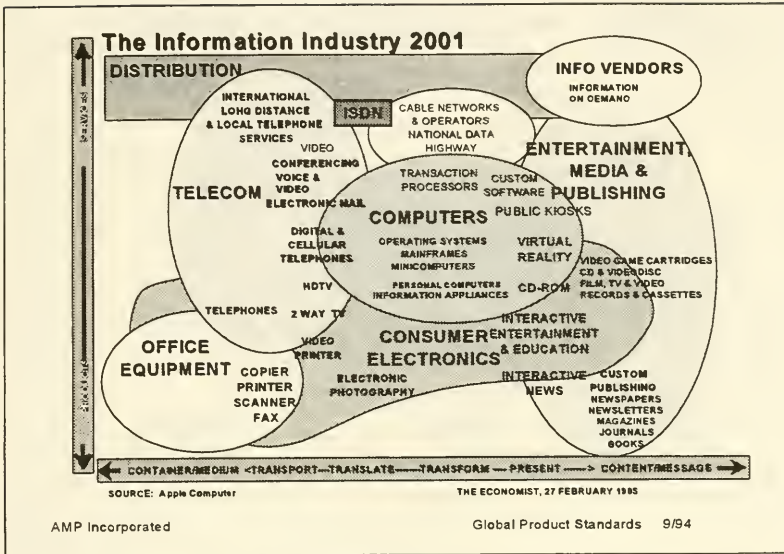


Figure 1

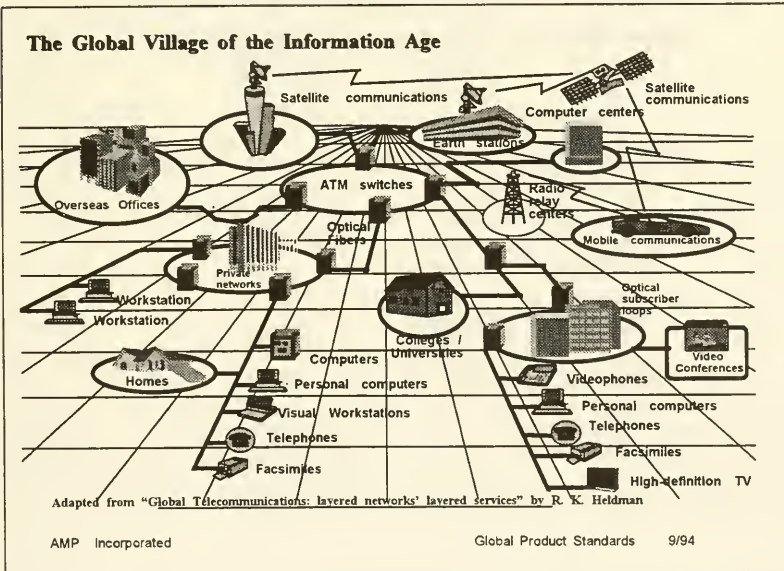
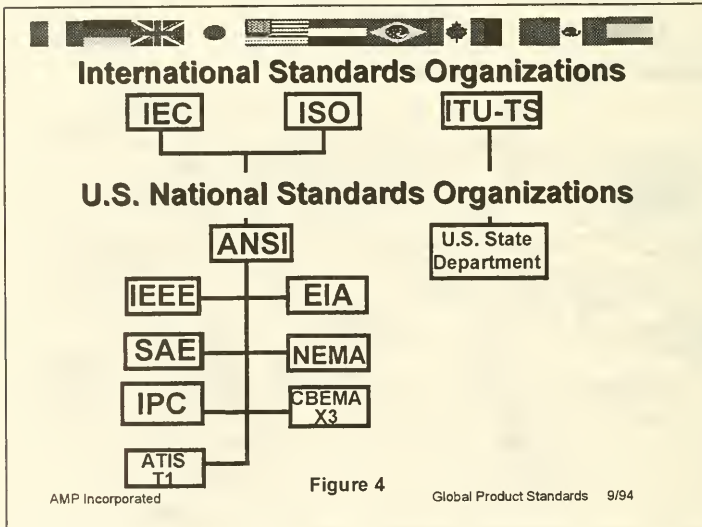
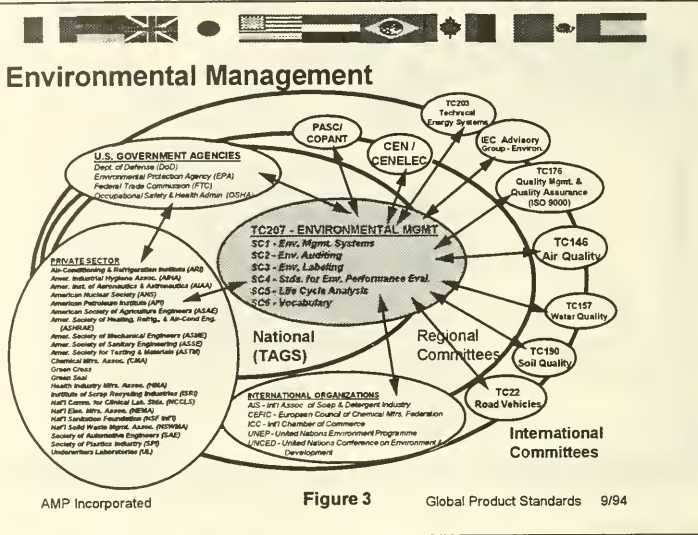


Figure 2



Mr. VALENTINE. Thank you, sir.

Before we proceed with the next witness, I would like to recognize a distinguished ranking member of the full committee, the gentleman from Pennsylvania, Mr. Walker, for any opening statement which he might have.

Mr. WALKER. Thank you, Mr. Chairman. What I would like to do is submit an opening statement for the record, if I could, rather than reading it.

Mr. VALENTINE. Without objection.

Mr. WALKER. I do want to welcome, though, my fellow Pennsylvanian, Henry Line, who just testified and thank him for that excellent testimony.

AMP really has been a leader in incorporating standards activities into their strategic plans and applying it on a global basis and recognizing the kind of global economy that we are developing, and I think his testimony here today is very useful to the work that we are doing to try to make certain that we have a standards regime that will fit the future.

Thank you, Mr. Chairman.

Mr. VALENTINE. I thank the gentleman, and we have been joined by other members, and I will recognize the gentleman from Washington, Mr. Inslee, if he has an opening statement.

Mr. INSLEE. Thank you, Mr. Chair.

This is an exciting matter, and I will submit my opening statement for the record rather than reading it.

Thank you, Mr. Chairman.

Mr. VALENTINE. Thank you, and the lady from Maryland, Mrs. Morella.

Mrs. MORELLA. Thank you. Thank you, Mr. Chairman.

I just want to say that I am very pleased to welcome our distinguished panel of experts here to this hearing on international standards, and these experts are in the field who will be discussing international standards for our industries and the Federal Government's role in the creation, implementation, and enforcement of these standards. It is a very important issue that must be addressed. Businesses today are increasingly faced with changing economies worldwide that are becoming more interrelated and therefore consequently more interdependent.

We must begin by assessing the role of the United States Government in creating and overseeing international industry standards in our global marketplace today. The increasing quality and availability of goods being produced worldwide mandates that our manufacturers match or exceed the levels of quality being set by other countries. Those American companies who do not do so will be left behind.

So the question before us in Congress is, what, if any, measures should be taken by the Government, and if congressional action is deemed necessary, what action should be taken? How might it affect the international marketplace, consumers and manufacturers, both large and small? We must ensure that any industrial standards set by the Government will enhance the competitiveness of our businesses and exporters and that whatever action is taken would be a benefit rather than a barrier to international trade and commerce.



So thanks, Mr. Chairman. I look forward to hearing from our experts, recognizing also in the first testimony that I am honored to represent NIST in my—in Gaithersburg, in my congressional district.

Thank you.

Mr. VALENTINE. Thank you.

Mr. Oksala.

Mr. OKSALA. Thank you, Mr. Chairman, members of the committee. I appreciate the opportunity to testify today on behalf of Unisys, the leading information technology products and services company, incidentally, also based in Pennsylvania. I therefore speak from the perspective of the information technology industry which has certainly been a shining star in American export performance and competitiveness. Our industry has emphasized standards and at the same time dealt with rapid technological change, and it has managed to do both with a fair amount of success.

The subject of standardization has received a great deal of attention. I have provided as part of my testimony a paper from the recent conference sponsored by Harvard and NIST which addresses this area, including actions that the Federal Government might pursue. In my limited time today, however, I would like to focus on three things: Participation in standards as the means to success; and certification as a general problem area; and the coherence of the U.S. standards system.

The voluntary standardization system has served our industry well. Our goal is international standards because we provide products to an international marketplace. National standardization is a means to that end, providing the vehicle through which our technical positions can be developed for the international arena. Standards have not been a barrier to trade, quite the opposite. Because of the successful international adoption of hardware and software standards, we can provide a single computer system design which is acceptable everywhere.

There are reasons for this success. The industry is multinational; there is a strong demand from our customers for standardized products. But I would contend that a major success factor is active and competent participation in technical standards development at the national level which is then taken to the international level.

When I hear complaints from other U.S. industries, I frequently find that those who are unhappy have viewed international standardization as unimportant, assuming that U.S. views will prevail by some sort of divine right. In today's world of tough international economic competition, it is not surprising that this attitude leads to failure. Active participation is the best, perhaps the only way, to get U.S. industry's views accepted. Industry needs to understand that it is hard to win if you don't show up for the game.

Industry participation is essential, but Government participation is also important. In our industry, Government agencies are active and valuable participants, but they do not and cannot represent the so-called best interests of the United States. No participant is capable of that. At best, the participants can effectively represent the technical judgment and desires of his or her own group. The process of building consensus through open interaction is the only



way to expose, evaluate, and reconcile the various interests that make up the national interest.

The point has been raised that smaller players can be disadvantaged by an increased focus on international participation. This is not really an issue. Participation at the international level is generally by national body delegations, and these delegations generally take positions determined in advance by standards groups in the United States.

While standardization and information technology has worked well, there are issues. One of the biggest is testing and certification based on the standards. This is a governmental issue because the requirements for third party testing and formal certification come largely from government. Of particular concern is the case where essentially the same requirements must be validated through multiple tests followed by multiple certification applications and approvals concluded by the application of multiple labels.

I have to tell you, the limit on the size of personal computers in the future will not be the state of technology but the need to have space for all the labels. This is an area where government is usually the only organization that can help. U.S. industry is best served, at least in our industry, when agreements between governments allow test and certification processes whose results are accepted in all markets. U.S. Department of Commerce activities in this area should be encouraged with an emphasis on minimum regulation and elimination of extraneous criteria such as country of origin.

The final area I would like to address is coherence. The U.S. system is unique in relying on many independent standards developing organizations. This has been a strength of the system, but it has also led to some contention, duplication, and confusion. In information technology we are also blessed with numerous consortia formed in response to real or perceived difficulties with the formal process. As a result, both vendors and users find it difficult to decide which standards are legitimate. I would not suggest that we abandon a system which has served us well. I would, however, argue that the growing economic importance of standards, particularly their importance to international trade, dictates a more coherent framework. One thing which will help this while maintaining our traditional strength traditional strengths is formal U.S. Government recognition of the existing private sector standardization program.

This is not a course which all industry supports. Some feel that any direct connection between the public and private sectors would result in unacceptable Government control. I believe, however, that recognition can be accomplished with acceptable interdependencies and mutual responsibilities which will keep leadership in the private sector and result in a more efficient and effective system for both parties. There is not, as recent OTA reports would suggest, a crisis which can only be solved through Government intervention, but there is opportunity for improvement through a more formal partnership. Thank you.

[The prepared statement of Mr. Oksala follows:]

## Standardization and Conformity Assessment in Telecommunications and Information Technology

by

Stephen P. Oksala  
Director, Corporate Standards  
UNISYS

### Introduction

Standardization and conformity assessment activities in the telecommunications and information technology sectors share a number of characteristics. Technology is changing rapidly. At the same time, purchasers of new technology are demanding interoperability between networks, computers, applications, and people. Therefore, we also need standards. Rapid technological change and standards don't usually fit together, and these complex standards must all be compatible with each other. These changes are occurring in an intensely competitive market where new companies are offering new products and services every day.

It's worth noting that there are differences between the telecommunications and information technology industries. The telecommunications industry has a history of regulation, while the IT industry doesn't. Telecommunications is also largely a service industry, while information technology has its roots in hardware and software products. There are significant cultural differences (such as attitude toward government involvement) between the two sectors because of these factors. While they use the same technology and must deal with many of the same issues, they are not one industry and are likely to react very differently to external forces.

### Impact on Industrial Development

How do standards-setting and conformity assessment affect patterns of industrial development? It should be no surprise that standards drive information technology product development. Clients demand the freedom to choose between vendors, so our industry has a broad range of formal and informal standards development. This is a world-wide process because the information technology industry's interest is in international rather than national or regional standards. Unisys and other companies participate nationally because that's the path to international acceptance. The U.S. information technology industry has been extremely successful in having its standards adopted internationally through the private-sector process because of this focus.

Software conformity assessment is relatively new to the information technology industry but it is becoming as important as standardization. Of increasing concern, however, is the requirement for formal product testing in accredited laboratories, as well as process audits like ISO 9000. Government procurement has been the primary driver in this area; there has been little demand by commercial customers for anything beyond a supplier's declaration of conformance. Such testing is extremely expensive, and it is by no means clear that the benefits are worth the cost - particularly when customers or markets require duplicate testing or certification. Harmonization of testing and mutual recognition of results would go a long way toward reducing costs and expanding the range of available products.

### **The Impact of Consortia**

Why has industry formed so many consortia? And is this a permanent change in the industrial process? Industry participants have formed consortia to complete specific technical work, promote standards, ensure implementation of standards in products, test products, and even build common software for their members. The public tends to lump all these activities together under the general term "standards." But if we focus just on consortia work on technical specifications, we see that the usual reason for consortia formation is to speed the completion of standards and ensure that they pertain to real products. Consortia have done effective and efficient work in this regard but there is no credible evidence that the consortia process is inherently faster than the formal standards process. It's worth noting that new consortia usually refer to the previous generation of consortia rather than the formal standards groups when they complain about speed. Consortia sometimes fall short of their goals because they believe that they can short-circuit the painful political process of developing broad-based consensus. Relying on the willingness of the participants to passively follow the major players has not proved to be an ideal solution.

Why, then, do consortia remain so popular? First, consortia do things other than standards development. Second, they concentrate on existing technology and product implementations to keep a greater focus on near-term success. OSI is an example of the opposite approach, and the world thinks of OSI when they think of the formal standards process. The OSI example may just be telling us that top-down, carefully architected anticipatory standards can't be successfully developed for complex environments with changing technology. De facto groups such as the Internet Society and the ATM Forum have been successful in meeting well-focused objectives with good industry consensus and a philosophy of taking small steps with proven implementations.

Consortia also seem to have effective methodologies. They work more intensively than formal standards groups; in some cases, participating organizations provide full-time people to expedite the work. They also make better use of technology. Therefore, they have the potential to be more efficient,

but they may also exclude the small participant because of the higher level of resources required. The formal standards process has always placed "due process" and "openness" ahead of efficiency; it has catered to the least endowed person, company, or nation. In the future, formal standards groups will probably have to adopt similar methodologies, even if participation becomes more difficult for individuals or small companies.

Consortia add value and are easy to form, so they will continue to be a factor in our industry. Unfortunately, the number of consortia becoming so large that there is often considerable confusion. We don't know which standards are the best technical solutions, we can't judge the credibility of any particular standard or standards group, and we don't have a clue about how to deal with mutually exclusive standards. Vendors react to this by participating in all the groups and implementing everything, while users express their frustration by demanding the formation of yet another new consortium to "do it right." This means added cost and time for everybody. Even more disturbing is the tendency for consortia to compete with one another after their initial missions are completed and they move toward expanding their scope in order to stay in business. The most likely outcome of this competition, if allowed to continue, is a new level of proprietary systems. Customers would have to choose both their consortia and their vendors since the likelihood of interoperability problems will be high.

We need to efficiently take advantage of these groups by doing two things. First, we need to recognize that the formal processes are preferred at the national and international levels. One rationale for standardization is the elimination of "low value" product differentiation and its associated costs to vendor and user. Competition in standards at the results level is not of benefit to either side. Given the number of independent groups in the process, the only way to establish a final winner is for a top level process to "bless" one or a very few standards for any given function and/or to bless (accredit) organizations as being competent. This process is currently provided by the formal process through accredited standards developers, through ANSI (in the USA) and on to ISO, IEC, and ITU. The only alternatives to using this process are to endorse chaos or turn over the blessing process to the U.S. government. Chaos is not the answer, and the problems with the government are discussed below. The answer is that the formal standards process still represents the best method for coherency in IT standardization.

The second thing that needs to be done is to separate technical development and formal approval in the formal standardization system. This will take advantage of the good work being done while maintaining a system for establishing legitimacy and minimizing confusion. Changes in the standards process may be required; for example, giving international consortia non-voting membership in the international organizations. It is unlikely that consortia will disappear given our inclination to create and use them and their ability to exist independent of their members. It is therefore necessary to maximize the



benefit that can be gained from the technical work gaining consensus in these other fora.

### **The Role of the U.S. Government**

The U.S. government's role in the standardization process has been the subject of intense debate for a number of years. There is general recognition that government will continue regulatory oversight where health and safety are important. In other areas we hope to continue our successful history of minimal regulation and see telecommunications regulation diminish accordingly. Where regulation is necessary government should use the voluntary system to the extent feasible. The European Union's approach of establishing general requirements and referencing voluntary standards for technical detail could be a useful model for American implementation.

Beyond regulation, there are a number of roles government might play in information technology standards and conformity assessment. Government is both a large user and a developer of technology; its agencies have significant technical expertise and a substantial stake in the outcome of the process. Government should therefore continue to actively participate in the voluntary standards process on the same basis as other interested parties. This will ensure the widest possible input to and acceptance of the resulting standards.

Government can also play a greater funding role in standardization. The formal standards infrastructure is largely dependent on voluntary funding. ANSI manages the US infrastructure and pays the U.S.'s share of ISO and IEC costs. However, many companies and public sector entities that benefit from the standards process and participate in detailed technical standardization are not members of ANSI; they are freeloaders in the national and international systems. Government could help alleviate this problem through significantly greater dues payments, coverage of specific infrastructure items such as ISO and IEC membership dues, or hosting international meetings in the U.S. Government can also support specific process improvements through grants such as the recent ARPA grant for the National Standards System Network project. Finally, government could support R&D tax credits for standardization activities.

Government can also take actions in the area of conformity assessment. Where required, government can negotiate mutual recognition agreements so that industry can test products once and sell them everywhere. Government can also offer services such as accreditation of laboratories or recognition of private sector accreditation programs. These roles support industry by providing needed services based on industry requests.

Government can help the standardization process through participation, funding, and other support mechanisms. However, despite a steady diet of studies and hearings, the government's potential role in managing the process

continues to draw the most attention. The information technology industry has been successful in standardization, so what added value could government bring to the management process?

One commonly heard reason for government management is to "represent the national interest." This sounds good - but how can anyone independently determine the "national interest" in technical work? The U.S. standards system allows all affected parties to represent their own interests. The sum of these interests can reasonably be considered to be the national interest. Government participants can represent the interests of their own agencies or a broader government constituency. Like participants from other organizations, each government employee brings to the process a mixture of personal technical beliefs, organizational interests, and concern for the overall success of standardization. Government participants do as well as others in properly managing their work, and appear to be under no illusions that they represent the technical interests of the general population.

Some people believe that the standardization process would be more effective and efficient under government management, but the arguments for this are not compelling. A major criticism of the formal standards process is the procedural overhead that sometimes seems designed to prevent accomplishments. A government-managed system would have even more stringent rules and greater delays. There may also be other constraints. Unrelated diplomatic and political considerations have affected government technical decisions in the past, and will presumably continue to do so in the future. The most recent example of this is the Clipper Chip controversy in which the federal government, despite almost unanimous opposition, is pushing ahead with its new encryption system.

The government can't do a better job unless it establishes a mechanism to dictate solutions when the interested parties have difficulty reaching consensus. We don't need this kind of "improvement." The current system may seem chaotic, but it's designed for maximum sensitivity to the wishes of the participants. Because of this, vendors and users will accept a solution once it surfaces. Forcing solutions will eventually result in a private-sector advisory function to a governmental standards organization. Those who believe such an organization would always be responsive to vendors and users need look no further than the Clipper Chip controversy to realize that an advisory function provides the right to comment, not the right to decide. Our system is based on a neutral administration of the process, facilitating consensus decisions by the participants. (Or no decisions - a standard may be desirable but not achievable because the necessary consensus doesn't exist.)

Government could help unite the process by formally recognizing the existing private sector system. It could do so by granting a "Federal Charter" to ANSI to firmly establish a clear and consistent path for national and international recognition. This is commonly done in other countries. Such an agreement



will require mutual responsibilities; in the vernacular, there may be "strings" attached. But reasonable dependencies would be a fair price to pay for the benefits gained from this new partnership. Some will oppose this partnership, feeling that any ties to government will irreparably damage the standards process. However, the standards world is changing and we are seeing those changes reflected first in information technology. Partnership will allow the U.S. private sector to continue to provide coherent and coordinated technical leadership at both the national and international levels and offer government the opportunity to take greater advantage of the system in lieu of internally generated standards and detailed technical regulations.

### **Users in Standardization**

Another currently fashionable topic among standardizers is users and their role in standardization. The current IT standards focus is in large measure due to user demands at several levels. Some users want to participate in developing technical solutions or advocating specific products or technologies, and are already active in the process. However most users want standards but don't care about the technical content. We frustrate them when we take forever to agree, or when we provide incompatible but apparently equally credible standards. Users should participate in the standardization process - even those who don't care about technical details can help define requirements, drive other participants toward completion, and buy standardized products. The latter is important because it tells the vendors that the desire for such products is real. As the GOSIP program has shown with remarkable clarity, there is a big difference between endorsing the principle of standards and using them.

### **Summary**

In summary, information technology standardization can be characterized through the following points.

- The development process is largely driven by international standards.
- Consortia will continue, and the formal standards process needs to make changes to recognize their work and adopt some of their methodologies.
- Government can participate in the process, provide additional funding, and establish other support mechanisms. It can also minimize regulation, establish sensible testing requirements, and work for mutual recognition worldwide. Most importantly, it can help establish a coherent national system supporting the international system by formally recognizing the existing private sector system and encouraging everyone to use it.
- Users can participate in many ways, but the system will not really work until purchases are consistent with principles.

Mr. VALENTINE. Thank you, sir.

Dr. Collins.

Ms. COLLINS. Thank you, Mr. Chairman and members of the subcommittee, for inviting me to testify today on the vital issue of international standards.

As others have pointed out, changes in the global economy demand that the U.S. Government and industry pay much more attention to standards issues. We need better cooperation between private and public sectors to achieve a coherent posture in domestic and international standards activities.

My remarks today center on the need for the national strategy to obtain broad participation in the standards process both at domestic and international levels. Industry standards developers and Federal agencies must recognize and use standards as a key element of our trade objectives.

The expression "standards" goes beyond product standards to include system and process standards. It refers not only to writing standards but also to the development of test methods, certification processes, and auditing procedures that enable manufacturers and independent third parties to assess product performance. This latter group of activities is commonly referred to as conformity assessment.

Standards are intended to facilitate trade and to ensure that a product can be manufactured once for the entire world. They are also intended to safeguard the public's health, welfare, and safety and protect the environment. They are crucial to U.S. exporters because they determine the markets in which U.S. products and services may compete successfully.

As others have noted, U.S. exporters used to be confident that U.S. products, standards, and technical specification would be accepted without question throughout the world, but in the past decade global competition has increased dramatically and U.S. competition has declined.

The U.S. standards process is primarily private sector and voluntary led by industry but with active participation by the Government. Three major players are industry, private standards organizations, and Government, all of whom are speaking here today. While this has worked very well in the past, it requires much greater coordination and better communication in the future to assure U.S. competitiveness in the global marketplace.

As my colleagues to my left have noted, there is no universally recognized coordinating body for the U.S. voluntary standards efforts. Thus, while the American National Standards Institute has many members from industry, standards organizations, and Government agencies and it is the U.S. member body to international organization for standardization, it is not recognized as the coordinating body for all our voluntary efforts. Furthermore, no single Government agency is responsible for developing and coordinating the standards policy of the Federal Government. While NIST cooperates with other Federal agencies and with the U.S. Trade Representative on standards issues, it has no defined functional role in developing and coordinating standards policy for the Federal Government. Again, nor does any other Government agency. In con-

trast, most other countries feature highly centralized standards systems, often government supported and funded.

Chief among the drawbacks to our decentralized standards systems in the United States is the perception that the United States lacks a single voice. Standards are crucial to exporters by determining again the markets where U.S. products and services may compete successfully and by ensuring that only one product design is needed for all markets.

The earlier assumptions that others would readily adopt our standards and buy our products is no longer completely valid, and international standards are being developed without adequate U.S. input or representation. This failure to participate makes the United States increasingly vulnerable to erosion of our market share, and lack of a coherent U.S. position developed by all the players complicates our participation.

Nonetheless, the picture is not all gloomy, and it should be noted that the standards participants in the private sector are making substantial progress in addressing some earlier internal problems. Much of the impetus can be traced to the higher profile of standards-related issues in corporate business strategies. Under new corporate leadership, ANSI is working through its various member councils, again representing industry standards organizations and Government, to develop and implement strategic plans that closely reflect their constituents' interests and address their concerns domestically and internationally.

Positive changes are taking place within the Government as well. I'll speak primarily from the standpoint of NIST here now. Dr. Arati Prabhakar, the director of NIST, has taken a very personal interest in standards issues. We have revitalized the Interagency Committee on Standards Policy to deal aggressively with the issues facing us and to develop strategies for solving the problems among Government agencies so that Government agencies can begin to have coherent solutions to the problem.

NIST does play a unique role in the standards process. Our mission is to promote U.S. economic growth by working with industry to develop and apply technology measurements and standards. We accredit laboratories to make the measurements needed by industry, we support international trade efforts such as GATT and NAFTA, and we provide technical support for the USTR and other agencies in their negotiations, and we also serve as members of numerous technical committees in the standards process.

To speed the exchange of information and facilitate communication among the players, NIST is a partner in private sector efforts to improve the availability of information on standards, managing a two-year, \$2 million grant to a consortium led by ANSI to develop a network to facilitate the exchange of standards information and documents. We are also providing support among Federal agencies for the National Information Infrastructure and working closely with ANSI in this process.

We are expanding our programs to advocate the recognition of U.S. standards and conformity assessment practices in foreign markets, and we have recently convened a working group to work through some of the issues dealing with laboratory accreditation. We are about to launch a new standards and trade support pro-

gram to reduce differences between U.S. products—U.S. standards and specific products and those of our NAFTA and other trading partners.

NIST firmly believes that the current private sector approach to standardization is best for the U.S. economy, but as noted by my colleagues to my left, many manufacturers feel that the current system is not always adequate for the changing international scene. We believe that better communication and cooperation among the players, standards organizations, industry, and Government is urgently needed. We have no magic solution to what is a very complex process. The means to improve the standards process are easy to recite but difficult to carry out.

NIST is prepared, however, to serve as a focal point in Government for coordination and information exchange, remaining fully cognizant of the statutory responsibilities and technical capabilities of the regulatory agencies. We will continue to work actively with all Federal agencies and with the private sector to develop and implement an effective strategy that balances both industry and regulatory needs and supports the Nation's trade objectives. With a coherent national strategy, all of us will be able to develop and present unified U.S. positions to the outside world.

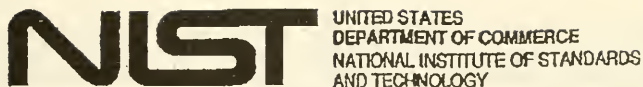
The new international work under way in the environmental area is providing a critical test of the effectiveness of the cooperative relationship now developing between Government and the private sector, and effective participation by U.S. standards and technical experts from all sectors is key to this activity.

In summary, it is clear that both Government agencies and private sector interests in the United States must work together to create an effective standards process that will enable us to respond effectively to the changes created by the global market. NIST is fully committed to strengthening ties with other Government agencies, with industry, with standards developing organizations, and with ANSI so that we can develop and implement a process that truly meet the needs of industry, regulators, and standards developers.

Thank you very much, Mr. Chairman and subcommittee members.

[The prepared statement of Ms. Collins follows:]





International Standards and U.S. Exports:

Keys to Competitiveness or Barriers to Trade

Dr. Belinda L. Collins

Acting Director, Office of Standards Services

National Institute of Standards and Technology

U.S. Department of Commerce

before the

Committee on Science, Space and Technology

Subcommittee on Technology, Environment and Aviation

September 22, 1994

I want to thank you, Mr. Chairman and subcommittee members, for inviting me to testify today on this very important issue.

The changing global economy demands that both the U.S. government and industry pay much more attention to standards-related issues. It also demands greater interaction between the public and private sectors to achieve a coherent posture in domestic and international standards-related activities to improve our world trade and benefit the U.S. economy. The Clinton Administration believes that the U.S. standards development system should continue to be industry-led, with government participation, and based on a private, voluntary process. We believe this is the best approach for the U.S. economy.

I will address my remarks today to the standards-related challenges facing the United States in the global environment, changes taking place in the U.S. standards system to deal with these challenges, and the several roles of the government, particularly that of the Department of Commerce's National Institute of Standards and Technology (NIST). I believe that there is a clear need to develop a systems approach to the standards process that will enable the government and private sector, working together, to achieve national goals more effectively.

### Scene Setting

Let me begin by sharing with you the key definitions and assumptions which underlie my testimony today. What do we mean by "standards process"? We must realize that the expression "standards" goes beyond product standards to include system and process standards, all of which are intended to ensure public, health, safety and protection of the environment, as well as to meet the challenges of global competitiveness. The term "standards process" refers not only to the process of writing standards, but also to the development of the test methods, certification processes, and auditing procedures that enable manufacturers, private sector and government buyers or independent third parties to assess product performance. These latter activities are commonly referred to as "conformity assessment." Thus a systems approach to the standards process in the United States needs to address issues related to both product and process standards, as well as those related to the means by which we can generate acceptable demonstrations of compliance with specified standards or regulations.

There is a growing consensus that we need a national strategy to obtain broad participation in this standards process, both at the domestic and international levels--a strategy for industry, standards developers and Federal agencies to recognize and use standards as a key element of our trade objectives. To develop a sound national strategy, we must recognize that the present U.S. standards process faces fundamental ideological problems, including different processes among standards developers and different dispute resolution mechanisms. We must examine the entire process and understand the relationships among participants in seeking a comprehensive solution. That is the basis for my presentation to the subcommittee.

### Standards in the United States: Who are the Players?

Standards are intended to facilitate commerce, safeguard the public's health, welfare, and safety, and protect the environment. In the United States the standards development process is industry-led and government-supported. The government's role in supporting the standards process is to promote the use of standards through purchase of products, to incorporate voluntary standards into Federal regulations where appropriate, to provide the technical underpinning for standards, to encourage international trade activities, and to advocate for the U.S. national interest. Involvement in particular standards development activities is voluntary and comes primarily from the private sector. This process has worked well for us in the past, but will require much greater coordination and better communication in the future to ensure U.S. competitiveness in the global marketplace.

Briefly, there are three major players in the standards process: U.S. industry, private standards organizations, and government. Technical experts from industry and government come together to support the activities of a large number of private standards-developing organizations (more than 600, at last count). The system's



numerous participants have different perspectives and objectives, with no clear coordination in either the Federal Government sector or in the private sector.

Industry experts participate in standards-writing committees to facilitate manufacture of products to an agreed-upon standard. Their participation is self-interested--companies frequently manufacture products to standards their own representatives helped to write. Balance is maintained by the participation of experts from a variety of industries, users, manufacturers, government and academia. The standards organizations provide secretariat services and produce documents for sale, with the American National Standards Institute (ANSI)--a federation of industry, standards developing organizations, and government agencies--serving as an "umbrella" organization. ANSI is the member body of the International Organization for Standardization (ISO), and supports the U.S. National Committee to the International Electrotechnical Commission (IEC). The Federal Government develops regulations, sets some standards, procures products, and provides technical expertise to a host of standards committees.

There is no universally recognized coordinating body for the U.S. voluntary standards efforts. Furthermore, there is no single government agency responsible for developing and coordinating the standards policy of the Federal Government. That includes NIST, which represents the United States in treaty organizations, such as the Organization for International Legal Metrology (OIML), and other international standards activities, and cooperates with other Federal agencies and with the U.S. Trade Representative on standards-related issues.

In contrast, most other countries feature highly centralized standards development activities, often government-supported. Chief among the drawbacks to a decentralized system of standards development is the perception among our trading partners that the United States lacks a single voice in the international standards arena. It requires considerable effort to arrive at a unified position for international standards-related discussions and negotiations. We have also found it difficult to reach consensus on the appropriate role to be played by the Federal Government in domestic and international standards, as well as to include the special concerns of state and local governments.

### The Impact of Standards on Trade

Product standards are crucial to U.S. exporters in that they determine the markets in which U.S. products and services may compete successfully. Historically, U.S. exporters were confident that U.S. product technology, standards and technical specifications would be accepted without question throughout the world. In the past decade, however, global competition has increased dramatically, while the U.S. competitive advantage has declined both at home and abroad. Previous assumptions that others would readily adopt our standards and buy our products are no longer valid. International standards are at times developed without adequate U.S. input or representation. Because incompatible national and regional standards raise the cost of doing business globally,

more effective participation by U.S. interests in international standards activities is now an economic imperative. Failure to participate in and influence these activities makes the United States increasingly vulnerable to erosion of our market share.

In those cases where the U.S. position has not been advocated effectively in international standards development, often the U.S. technical solution has not prevailed against competing positions advocated by some of our major trading partners, particularly those in Europe. Specific examples cited by industry representatives include the electromagnetic compatibility arena, where standards being developed by the IEC are evolving in response to regional standards work undertaken to support European product safety legislation; synchronization for telecommunications, where there is a substantial challenge to U.S. leadership from Japan and Europe; and pressure vessel standards, where the de facto world standard developed by the American Society of Mechanical Engineers (ASME) competes with a less stringent European standard which sells better in developing countries.

Export obstacles result from disparities between U.S. standards and those of our trading partners. Manufacturers of electrical and electronic equipment must account for the different voltages and power cycles in various regions and design their equipment (and power cords) accordingly. Equipment sold in the North American market is typically designed to operate at 110v/60Hz, and equipment destined for Europe must operate at 220v/50Hz. In Japan it operates at 110-120v and 50-60Hz. Such differences in standards can exclude U.S. products from markets or force multiple designs and changes in U.S. manufacturing procedures to meet foreign requirements.

#### The Impact of Conformity Assessment on Trade

Laboratory testing of products, accreditation of competent laboratories, certification that products meet appropriate standards, and registered assessment of process quality according to international standards are also keys to product acceptance in foreign markets.

In some cases differences in requirements for testing and certifying products as meeting applicable standards pose additional obstacles to U.S. exports. As a result, U.S. exporters must duplicate domestic testing with costly and time-consuming approval and certification procedures in other markets in order to meet their requirements for product acceptance. Test data generated in the United States may not be accepted in many foreign countries. In addition, many exporters are unable to obtain sufficient information on foreign standards and certification requirements, which often are complex and detailed, compounding the difficulties created by disparities among national standards and certification requirements. Conversely, foreign exporters and their governments have trouble understanding U.S. requirements—or even identifying the agency responsible for a particular product. This in turn leaves the United States very vulnerable to claims of unreasonable trade barriers.

Problems relating to certification are not limited to product requirements, but also extend to process or system standards. For example, U.S. manufacturers have had difficulties with the ISO standards for managing quality systems--ISO 9000. Governments and large private sector buyers in Europe, North America and the Pacific Rim are establishing ISO 9000 compliance as a condition for qualifying suppliers for procurement contracts. Suppliers to major multinationals are also affected. Also, some procurement agencies and major buyers in the private sector require forms of quality assurance other than ISO 9000, forcing manufacturers to undergo multiple audits of their facilities. Multiple audits and registrations are costly to U.S. industry, in terms of both monetary and personnel resources. Companies that do not register their quality systems through an accepted independent third party registration program are increasingly at a disadvantage in competing for market share in Europe and other global markets. Although the ISO 9000 standards are internationally recognized, there is no mechanism for international recognition of registration to these standards.

The United States has lagged in establishing an accreditation program for quality system registrars, leading many U.S. manufacturers to seek out foreign registrars to acquire recognition of their registration in foreign markets. One U.S. private sector accreditation program is now in place, operated jointly by the American National Standards Institute (ANSI) and the Registrar Accreditation Board (RAB). While this registration of a manufacturer's quality system may or may not be recognized around the world, managers of the ANSI/RAB program have moved quickly to establish cooperative relationships with their counterpart accrediting bodies in Europe and the Pacific Rim. These relationships have been painstakingly built up through bilateral agreements with individual foreign accreditors.

ISO is considering an international system for recognizing quality system registrations. An international system is a more efficient and cost-effective means of assuring that companies can register their quality systems once and be confident that this registration will be recognized in all markets.

Given ISO 9000 experience to date, U.S. industry is intent on preventing a similar scenario from developing in the environmental management arena. ISO began an effort in 1993 to develop standards for environmental management systems, auditing, labelling, life cycle assessment and environmental performance evaluation, as well as guidelines for environmental aspects of product standards. Working together, ANSI, ASTM (American Society for Testing and Materials) and ASQC (American Society for Quality Control) have been aggressive in securing private sector participation. Many participants in this ISO standards development process, including the United States, Japan and Canada, are pressing for early consideration of internationally agreed guidelines for system registration. We cannot afford overlapping or conflicting approaches to protecting the world's environment, but must instead adopt a universally accepted system to which we can all subscribe. The United States must continue its active participation in the development of internationally accepted environmental standards.

### Changes on the World Scene

The global picture is not all gloomy, however. International cooperation is increasing in many areas, as indicated by the recently concluded Uruguay Round of multilateral trade negotiations and by our own NAFTA activities. The provisions of the Agreement on Technical Barriers to Trade (TBT) will hence forth apply to all members of the World Trade Organization (WTO). The Agreement is designed to preserve the ability of governments to adopt domestic standards, technical regulations and conformity assessment procedures in order to protect health, safety and the environment, but guards against the unjustified use of such measures to protect a domestic industry. NAFTA commits both the United States and Canada to provide technical advice, information and assistance to Mexico on request to enhance its standards-related measures and related activities. All three parties in NAFTA have also committed to consult with one another during the development of or change in any standards-related measure. The United States and Canada are working diligently together to harmonize standards, particularly those for electrical safety.

Here in the United States, the government and the private sector are looking for means to make the U.S. representation on international standards and conformity assessment issues more effective.

### Changes in the U.S. Standards System

We are pleased to observe that participants in the private sector voluntary standards process have recently made substantial progress in addressing their internal problems. Much of the impetus for this change can be traced to the higher profile of standards-related issues in corporate business strategies. Presidents and CEOs in the manufacturing sector now realize that the primary trade barriers they face in many foreign markets are standards-related. They are demanding more effective representation in international standards development activities, as well as pushing for both private sector and government efforts to improve the recognition and acceptance of U.S. standards and conformity assessment processes in foreign markets.

Now under new leadership, ANSI is working through its various member councils--representing companies, standards developing organizations and government--to develop a strategic plan that closely reflects its constituents' goals and interests. In particular, ANSI leadership is working closely with the major standards developing organizations and with Federal agencies in the United States to address national concerns, in both the domestic and international arenas.



### The Roles of Government

Government policy, as expressed in OMB Circular A-119 on Federal Participation in the Development and Use of Voluntary Standards, directs Federal agencies to participate in voluntary standards development activities--both domestic and international--and to reference international standards in procurement and regulatory applications whenever feasible. This participation by Federal agencies, as users of standards and as technical experts, brings both direct and indirect benefits to U.S. exporters. For example, it can minimize differences between the domestic and international standards imposed on specific products in the United States, especially in prime export sectors. The Federal agencies that are responsible for approving products for the domestic market clearly need to participate in regulatory harmonization with their counterpart authorities in key foreign markets, as well as with industry, to effect changes in regulatory requirements and underlying standards and test methods. Federal agencies' support for internationally harmonized standards in regulatory and procurement activities means reduced costs for exporters (and domestic consumers), as well as faster development of new products.

The OMB Circular also directs the Secretary of Commerce, through NIST, to coordinate and foster executive branch implementation of standards policy, and to establish an interagency consultative mechanism to advise the Secretary and agency heads in implementing policy--the Interagency Committee on Standards Policy (ICSP). It asks Federal agencies to establish procedures to ensure that agency representatives ascertain the views of the agency and express views that are not inconsistent or in conflict with established agency views. It also stipulates that when two or more agencies participate in standards they coordinate their views and present a single unified position--or a joint statement of their mutual differences.

The Director of NIST has designated me to serve in her place as chair of the ICSP. Each department or agency head is now required to designate a Standards Executive, with direct access to the highest-decision making authority, to serve on the ICSP and to act as a focal point for monitoring and coordinating standards activities throughout the department or agency. Both NIST and OMB consider that Standards Executives fulfill a vital role in meeting national objectives on standards-related matters. We are acting to revitalize the ICSP, as a key means for ensuring coordination and cooperation among Federal agencies on standards issues, and to develop policy for more effective coordination with the private sector. I have just established an ICSP working group to define the standards issues facing different government agencies and to suggest strategies for solving some of the problems. NIST is prepared to serve as a focal point in government for coordination and information exchange. In this role, we will remain fully cognizant of the statutory responsibilities of regulatory agencies and the distinction between those responsibilities and the requirements for enhancing the nation's trade competitiveness.

We have already seen a significant change in the perspective of regulators and procurement agencies regarding international standards. Many have shown a growing awareness of the need to address regulatory issues on a regional or global basis. Some agencies have made a policy commitment to become more involved in the international standards arena as a means to this end. Standards and regulatory convergence have also become critical elements of trade negotiations.

Examples of international harmonization efforts underway in the United States include the initiatives taken by the Federal Communications Commission (FCC), the Food and Drug Administration (FDA), and the Commerce Department to adopt and conform to international standards. U.S. agencies are increasingly relying on voluntary standards as the technical basis for regulations and are looking to international standards, such as the ISO 9000 series dealing with quality systems, to help reduce procurement and administration costs. Secretary of Defense Perry's recent memorandum to Department of Defense (DOD) procurement activities is an important example of change in this area. The new DOD policy requires the use of performance specifications and private sector standards instead of military specifications and standards, unless no other alternative exists. It specifically encourages DOD representatives to form partnerships with industry associations to develop nongovernment standards to replace military standards where practicable.

Regulatory agencies at all government levels have also become increasingly sensitive to the international impact of testing and certification requirements. This is partly because more foreign products are entering the U.S. marketplace, with increasing pressures on regulators. However, there is also a growing sensitivity within the government about the potential impact of domestic regulatory requirements on the competitiveness of U.S. manufacturers in foreign markets. Finally, Federal agencies are taking the lead in developing accreditation programs that meet international guidelines and are also supportive of mutual recognition of conformity assessment.

### The Role of NIST

Among Federal agencies, NIST plays a unique role in support of the U.S. standards process. Our mission is to promote U.S. economic growth by working with industry to develop and apply technology, measurements and standards. We are committed to serving as a productive partner for improving communication and cooperation among government and standards organizations. As part of its core mission, NIST produces the fundamental physical standards, measurements, test methods, reference data, and materials which provide the technical underpinning for standards and conformity assessment. NIST staff work actively in the voluntary standard process, holding over 1100 memberships on more than 800 standards committees, from information technology to fire safety. Through programs administered by the Office of Standards Services, NIST accredits laboratories to make measurements needed by industry (including calibration procedures, asbestos, flammable fabrics, and construction materials) and supports



international trade efforts, such as GATT and NAFTA, as well as bilateral negotiations for mutual recognition of product approvals with major trading partners.

NIST also serves as a partner in private sector efforts to improve the availability of information on standards. Under the Administration's Technology Reinvestment Project (TRP), NIST is managing a 2-year, \$2 million grant to a consortium led by ANSI to develop a National Standards System Network. This network will create an electronic infrastructure linking the databases of standards developers, producers, distributors, and users of technical standards in the United States. It will provide a means for participating in standards development electronically, as well as for accessing available information on foreign national, regional, and international standards.

NIST has been designated to coordinate the review and clarification of the standards process in the National Information Infrastructure (NII), an interconnection of computer, telecommunications, entertainment, wireless, and other networks, services and applications. It has the potential to significantly improve the way people use information in their jobs and other aspects of their daily lives by bringing vast amounts of information and greatly improved services to virtually every citizen. As an initial step, NIST has undertaken two activities: a review of the requirements for an open systems network and an ongoing assessment of the Federal Government's role in the standards process. In this we are collaborating closely with ANSI's Information Infrastructure Panel. Our objective is to develop an action plan for developing standards for the NII which will address the issues associated with proposed and/or required architectures, user and content provider requirements, cross-industry cooperation and optimal roles for the Federal Government. ANSI will play a critical role in generating industry support for NII-related standards development.

We are expanding our programs to advocate the recognition of U.S. standards and conformity assessment practices in foreign markets. In 1995, NIST will launch a new Standards and Trade Support Program. Its major goals are to reduce differences between U.S. standards on specific products and those of our partners in NAFTA and elsewhere, especially in primary export areas; to maximize adoption by developing countries of U.S. standards and technology; and to provide the technical underpinning necessary for recognition of U.S.-based conformity assessment activities by foreign regulatory authorities. These goals will be addressed through six complementary programs or initiatives. We will establish permanent representation in the European Union by resident, professional NIST staff who will work to facilitate recognition of U.S. technology, test methods, and conformity assessment results, all using private sector input, and provide technical advice and support to commercial and economic staffs in U.S. embassies to identify and resolve trade issues involving technical barriers. We also plan to establish permanent NIST representation in selected "Big Emerging Markets," such as Mexico and India, and U.S. standards support offices in other key markets, staffed by nationals, to serve as local points of contact for U.S. industry on technical barriers to trade and to inform NIST when additional assistance is needed. This NIST

program will also include a critical training component, including familiarization activities for metrologists and standards writers from Canada and Mexico as part of the implementation of NAFTA. In cooperation with the Department of Commerce's International Trade Administration and ANSI, we are developing a standards internship program for 100 engineers, administrators, and technical and regulatory experts from Russia and the Newly Independent States.

#### Actions Taken to Improve the U.S. System

I noted earlier that ANSI leadership has begun the critical process of working with its various constituent organizations to improve cooperation among participants in the domestic system and to ensure more effective international representation of the nation's interests. NIST is working with ANSI and its member councils to delineate responsibilities of and relations among companies, standards organizations, and the government, and to improve communications among all parties to improve the voluntary system.

Under Dr. Prabhakar's guidance, NIST has initiated a change in leadership and direction in our standards and trade-related programs. The Office of Standards Services (OSS) has been reorganized to strengthen relationships with private, voluntary standards organizations, industry, and other Federal agencies and to focus on the impact of standards and conformity assessment on international trade. We have met with working groups from all three sectors to encourage dialogue toward a more effective standards process, and are encouraging high level participation in the ICSP by other Federal agencies. We have established a major technical program, the National Voluntary Conformity Assessment Systems Evaluation (NVCASE), as a mechanism for assuring other governments of the competence of qualified U.S. conformity assessment bodies, with test cases proceeding in the recreational craft and telecommunications areas.

With the American Council of Independent Laboratories (ACIL) and ANSI, NIST has also formed an informal working group on laboratory accreditation issues. This group brings together testing laboratories, accreditors, regulators, manufacturers and users to discuss concerns that laboratory accreditation processes in this country are often inefficient and wasteful. Issues include the real or perceived need for multiple assessments, uncoordinated requirements of regulators and industry, and the absence of any centralized infrastructure. Costly, duplicative accreditations create problems for U.S. industry in the trade area as well, as many foreign governments do not readily accept U.S.-generated test data, even from an accredited laboratory. Through this working group, we will elicit constituent views and perspectives and work together to develop and implement effective solutions for our problems.

### Challenges for the Future

We believe that the U.S. standards development system should continue to be industry-led, with government participation, and based on a private, voluntary process. This is the best approach for the U.S. economy. However, it is clear that many manufacturers feel that the current system is not adequate to deal with the changing international scene. For example, ANSI goes to the international table without any formal government backing, placing it at some disadvantage relative to other participants. The United States now plays a reactive role in standards in some areas, rather than setting the agenda for the rest of the world. We have no magic solution to what is a very complex process. The means to achieving an improved standards process are easy to recite and difficult to carry out. Better cooperation and communication among standards organizations, industry and government is needed to make our system more effective. We must pinpoint goals and change our operating strategies to meet national interests. Government and the private sector must work together to ensure that we meet the domestic and global needs of the public, individual companies and industry sectors, as well as local and national governments.

The challenges that face us all include the implementation of effective means for ensuring foreign acceptance of U.S. conformity assessment results—that is, test data, certification of products to applicable standards, and quality assessment registration. This will enable our manufacturers to reduce the multiple product assessments now required to meet a host of domestic demands and those of foreign regulators and importers. Our approach must be to develop a process based on internationally accepted standards that can be adapted to the needs of specific regulators, capitalizing on mechanisms such as NVCASE to give credence to the work of competent public and private sector assessment bodies.

Challenges for the Federal Government as a whole include working with the private sector to improve the current standards process to deal with the changing international scene. To this end, we must change our operating strategies to meet national interests more effectively. NIST will continue to work with other Federal agencies and with the private sector to develop and implement an effective strategy that balances industry and regulatory needs in support of the nation's trade objectives. We must take a close and comprehensive look at the various demands placed on agencies, then coordinate our priorities to minimize duplicate or competing activities and to encourage concerted action in important areas. With a coherent strategy, we will be able to develop and present unified U.S. positions to the outside world. The new work underway in ISO and IEC in the environmental area provides a critical test of the effectiveness of the cooperative relationship in the standards arena that we are now building between government and the private sector.

In summary, it is clearer than it ever has been that both government agencies and private sector interests in the United States must create a workable standards process for the United States that will enable us to respond effectively to the challenges created by the global market. NIST is fully committed to strengthening ties with other government agencies and the private sector so that we can develop and implement a process that truly meets the needs of industry, regulators, and standards developers.

This concludes my statement, Mr. Chairman. I would be pleased to answer questions.

June 13, 1994

## Biography

Belinda Lowenhaupt Collins

Room A603, Administration Building  
National Institute of Standards and Technology  
Gaithersburg MD 20899  
301-975-4000 (fax 301-963-2871)

Belinda L. Collins, received her B.A. in experimental psychology from Mary Washington College, and her M.A. and Ph.D. in experimental psychology (vision) from the University of Virginia. She is currently the acting Director of the Office of Standards Services at the National Institute of Standards and Technology (formerly National Bureau of Standards). For the past 17 months, she was assigned to the NIST Director's staff as a program analyst covering the Building and Fire Research Laboratory, the Advanced Technology Program, and standardization issues. During 1992 she served as a member of the Technical Evaluation Panel and Source Evaluation Board for the NIST Advanced Technology Program. From 1984 to 1994, she was Leader of the Lighting Group in the Building and Fire Research Laboratory. Dr. Collins' research interests include the impact of lighting systems and distributions on lighting quality and effectiveness, effects of light on color appearance, and visibility of exit signs. She has authored numerous technical publications in the area of lighting and human response. Currently, she chairs the International Lighting Commission (CIE) Technical Committee (TC) 3.16 on Psychological Aspects of Lighting and is the secretary and the U.S. Representative to CIE Division 3. She chaired the Illumination Engineering Society of North America (IESNA) Papers Committee from 1990-1993, the Accredited Standards Committee Z535 on Safety Signs and Colors from 1982-1993, and the NFPA Fire Safety Symbols Committee from 1978-1985. She currently is a member of the IESNA Papers Committee, the Psychological Aspects Committee and the Emergency Lighting Committee, as well as a member of ASTM E-12, the American Association for the Advancement of Science, the Human Factors Society, and the Optical Society of America. Dr. Collins was recently designated a Fellow of the Illumination Engineering Society of North America.



Mr. VALENTINE. Thank you.

Mr. Meier.

Mr. MEIER. Thank you, Mr. Chairman. I appreciate the opportunity to be before you this morning to talk about a very important topic both for the country and its business community and its consumer interests and a very important topic for those of us in the Government who sit in trade policy.

I appeared before your committee a number of years ago, sir, and I would comment also that I think a great deal has happened in the intervening period to heighten the awareness and interest in this subject. Certainly in my office, the Office of the U.S. Trade Representative, we have seen a lot more interest in this issue and we are spending a lot more time on it.

I would like to briefly describe what our role is and what our interests are in this subject, and I will refer to some of the points in my written statement. My written statement contains a good deal of information about the interagency coordinating process, which I won't repeat here in my oral statement, and also goes into some detail on a good number of international trade agreements that deal in the standards area, and I think I will also speak only about those in very brief terms and concentrate on some of my overall observations.

First of all, my office, the Office of the U.S. Trade Representative, advocates participation in the development of international standards and their use domestically. We believe that international standards can be a tool to competitiveness and should not pose a barrier to trade. If used strategically, the development of international standards can yield significant competitive advantages, and the United States is well positioned to share in these benefits. As both Mr. Oksala and Dr. Collins mentioned, this is not something that happens automatically, it requires a great deal of effort both on the part of the private sector and the part of the Government to assist this process.

As you are no doubt aware, USTR plays a leading role in the development of policy and trade. We do not have a specific role in establishing product regulations or standards, but the Trade Agreements Act of 1979 gives the USTR the responsibility for coordinating U.S. discussions and negotiations with foreign countries for the purpose of establishing mutual arrangements with respect to standards-related activities. We also have oversight responsibilities once such agreements are concluded. We consult very closely and extensively with other Federal agencies having specific expertise in the matter under discussion, and we consult with our private sector advisory committees and, of course, the Congress during this process.

I want to emphasize that while the U.S. Trade Representative plays a key coordinating role, active and effective participation by the various agency representatives in the process is critical to ensuring our success in representing U.S. interests.

I would also like to note the role of the industry Functional Advisory Committee on Standards, which is congressionally mandated, which has been particularly helpful in providing technical assistance and policy advice on standards-related trade policy issues, not just to USTR but to the entire Government process, and I note that



its chairperson, Barbara Boykin, is in the audience today, and I certainly commend her work personally; it has been of great help to us as we tackle these issues.

I would note that we have two main objectives related to standards, and I think I am echoing some of the earlier speakers here. One is to improve and support the competitiveness of U.S. products and, number two, to enhance specific market access opportunities for U.S. exporters. By and large, our priority and our preferred approach is to ensure that other countries have in place institutional mechanisms to ensure that standards, technical regulations, and conformity assessment procedures are developed in a transparent manner and are applied on a nondiscriminatory basis to foreign and domestic suppliers.

However, when we see specific export-related problems, my office, in cooperation with the Commerce Department's bilateral and regional experts, the Foreign Agricultural Service, in some cases the State Department's economic officers abroad, we all work together to try to eliminate specific technical barriers to trade that are facing our exporters in foreign markets.

I think it is clear that the competitiveness of U.S. products is inexorably<sup>1</sup> linked to the costs associated with producing to a particular standard, and I think Mr. Oksala made this point in his comments. Multiple testing for the same or similar standards in a variety of markets adds to the costs of export, it does not facilitate trade, and it impedes the growth of trade. We are very interested in working to reduce that—the level of that problem, and a number of our trade agreements go in that direction.

I would just mention real quickly the number of areas where we have very substantial standards-related agreements. One is, there is an existing standards agreement within the General Agreement on Tariffs and Trade; the code that was negotiated at the end of the Tokyo Round on technical barriers to trade; there is a substantial section of the new World Trade Organization agreement dealing with standards; there is an extensive treatment of standards in the NAFTA agreement; and we are talking about standards-related activities in the context of the Asian Pacific Economic Cooperation Forum; and I think that is just an example or an illustration of how important standards is becoming in terms of trade policy.

I would also like to note that we are engaged in negotiations with the European Union on what are known as mutual recognition agreements, and I think this again goes to Mr. Oksala's point that the Government is trying to negotiate a basis on which tests and certification results can be accepted on a bilateral or potentially on a multilateral basis so that companies do not have to go through the expensive testing and retesting process and that this will reduce costs associated with demonstrating product conformity, and it is something we are working on very assiduously, and we have had a series of meetings, and we will probably go back to the negotiating table with the European Union Commission this November.

Just in conclusion, Mr. Chairman, I think what I am saying, and I am certainly echoing what others have said here today, is that

<sup>1</sup>The witness wishes to replace "inexorably" with "inextricably".

standards, technical regulations, and conformity assessment procedures are an important component of our trade policy, and our market access negotiations with foreign governments play a very important role in our policy towards standards, at least from our perspective.

At the same time, I would note that we are frequently called upon to explain and defend regulations maintained by U.S. processes, and the complexity of our decentralized voluntary standardization system frequently is questioned by our foreign colleagues. We are confident that given our domestic legal contacts, our regulators, and our voluntary standardization community does not engage in the creation of technical barriers to trade as defined by our trade agreements, and we are best able to respond to questions and requests for information when we secure the cooperation and expertise of these various regulatory agencies and the private sector standards community. I think the fundamental point there is that our system is confusing to our foreign colleagues, but we are, I think, with the assistance of the private sector and the various regulatory agencies involved, we are able to satisfactorily explain it, although it sometimes takes some time.

USTR's perspective is, by and large, oriented toward securing the basis for fair competition for U.S. products in foreign markets, and the focus of our trade agreements is more on the prevention of technical trade barriers in the form of Government mandated requirements and less on the strategic use of voluntary standardization. As I have noted, the importance of international standards is recognized in our trade agreements, and their use and our participation in their development is but one of our responsibilities under our trade agreements and our authority given to us by Congress.

Given the increasing competitive challenges facing our firms today, more than ever it is important for the Federal Government and the private sector to work together to ensure that international standards reflect U.S. marketplace and regulatory needs. As I said, we rely heavily on the interagency process, on the advice given to us by our IFAC on standards, and on our relationship with individual members of the private sector who are involved in standards issues. We look to ANSI, and we work cooperatively with ANSI as the member body of the International Organization for Standardization and the International Electro-technical Commission and look to them to be a focal point for representation of our interests in those organizations.

Finally, I would like to note that we strongly support the role of the National Institution of Standards and Technology in coordinating domestic implementation of OMB Circular A-119. Effective implementation of the requirements of that circular and greater awareness among Federal agencies of the importance and relevance of international standards is an important complement to our efforts to ensure effective market access for U.S. products abroad.

Thank you.

[The prepared statement of Mr. Meier follows:]

International Standards and U.S. Exports:  
Keys to Competitiveness or Barriers to Trade?

Testimony by Richard G. Meier  
Deputy Assistant U.S. Trade Representative for GATT Affairs  
Office of the U.S. Trade Representative  
before the  
Committee on Science, Space and Technology  
Subcommittee on Technology, Environment and Aviation  
U.S. House of Representatives  
September 22, 1994

Thank you, Mr. Chairman, for convening this hearing and providing my office with the opportunity to present our views on the relationship between international standards and U.S. competitiveness.

The use of standards (voluntary), technical regulations (mandatory) and conformity assessment procedures as non-tariff barriers to international trade has taken on a greater recognition among the many and various trade issues confronting my office -- the Office of the U.S. Trade Representative (USTR). Heightened interest in health, safety and environmental objectives, and concerns that international trade agreements might affect our ability to achieve these objectives, have accentuated this development. I would like to begin by briefly describing USTR's interest and role in issues pertaining to standards and competitiveness, to provide some background and information on our trade agreements and multilateral and bilateral fora where the Federal government addresses standards-related issues, and to conclude by defining the challenges as we see them today.

My office is an advocate of participation in the development of international standards and their use domestically. We believe that international standards are a tool to competitiveness, and should not pose a barrier to trade. If used strategically, the development of international standards can yield significant competitive advantages -- the United States is well-positioned to share in those benefits.

USTR's Role in Standards-Related Trade Policy

As you are undoubtedly aware, USTR plays a leading role in the development of policy on trade<sup>1</sup>. While USTR has no role in establishing specific product regulations and standards, the Trade Agreements Act of 1979 specifically gives the USTR "responsibility for coordinating United States discussions and negotiations with foreign countries

<sup>1</sup> Attachment I provides detailed information on USTR's overall role in the development of trade policy, the legislative underpinnings and the interagency mechanisms that are in place.

for the purpose of establishing mutual arrangements with respect to standards-related activities (P.L. 96-39, Subtitle B, sec. 411(b))." We also have oversight responsibilities once such arrangements are concluded. In carrying out these responsibilities, we must consult with the various Federal agencies having the expertise in the matters under discussion. During the interagency review stage, we are also obligated to consult with private sector advisory committees and, of course, the Congress.

To this end, USTR chairs a number of Trade Policy Staff Committee Subcommittees devoted solely to issues of standards-related trade policy. These subcommittees are organized either in relation to specific trade agreements (such as the GATT Agreement on Technical Barriers to Trade, or the North American Free Trade Agreement (NAFTA)), or on-going negotiations (for example, those with Europe to negotiate mutual recognition agreements) or bilateral/regional interests (for example, Asia Pacific Economic Cooperation (APEC) work on standards). While the Office of the U.S. Trade Representative plays a key coordinating role, active and effective participation by the various agency representatives in the interagency process is critical to ensuring our success in representing U.S. interests.

The Industry Functional Advisory Committee on Standards (IFAC-2) has been particularly helpful in providing technical assistance and policy advice on standards-related trade policy issues. This Committee has broad participation and represents not only the stake holders of the standards community (standards developers, testing laboratories, certification bodies, etc.) but industries as well. Their work has been complemented by advice received from some 16 sectoral advisory committees which ensure that a particular industry's interests are considered. In addition to consulting with the Congressionally-mandated advisory committees, there are a number of ad hoc mechanisms that ensure coordination between the Federal government and private sector interests.

The overriding goals of our trade policy as it relates to standards-related issues are:

- (a) to increase the competitiveness of U.S. products; and,
- (b) to enhance market access opportunities for U.S. exporters.

By and large, our priority is to ensure that countries have in place institutional mechanisms to ensure that standards, technical regulations and conformity assessment procedures are developed in a transparent manner and are applied on a non-discriminatory basis to foreign and domestic suppliers. When specific problems arise for U.S. exporters, my office, which relies heavily on assistance from the bilateral and regional



experts at the International Trade Administration of Commerce, Foreign Agricultural Service of USDA, and State Department's economic officers in our embassies abroad, will work to eliminate individual technical barriers to trade in foreign markets.

The competitiveness of U.S. products is inextricably linked to the costs associated with producing to a particular standard, or to meet a particular regulatory requirement, including the costs associated with demonstrating product conformity, such as testing, certification and quality system registration. These costs may be justified when looking solely at the large U.S. market, but in today's increasingly competitive world, we no longer have that luxury. Most businesses must look to other markets to maintain their profitability. In an ideal world, a supplier could produce to a globally accepted standard and would not have to demonstrate repeatedly the conformity of that product to the standard. That vision is embodied in a number of our trade agreements that address technical barriers to trade and I would like to turn to those now.

#### The Implications of Multilateral and Regional Trade Agreements and Arrangements for U.S. Competitiveness

The United States is signatory to a number of trade agreements which attempt to discipline the use of technical requirements as arbitrary or unjustifiable barriers to trade. Among the key features of all trade agreements which address technical barriers to trade is the encouragement to participate in the development of international standards and to use them for domestic regulatory purposes, where possible and appropriate. Promoting U.S. trade policy objectives requires efforts at multiple levels -- multilateral, regional and bilateral -- as exemplified by the various agreements and fora which are addressing standards-related trade issues.

#### **A. The WTO Agreements on Technical Barriers to Trade and Sanitary and Phytosanitary Measures**

The United States and 45 other countries are currently signatories to the MTN Agreement on Technical Barriers to Trade. The Tokyo Round Agreement on Technical Barriers to Trade was the first multilateral effort to reduce or eliminate technical barriers to trade. This Agreement, which entered into force for the United States in 1980, attempts to eliminate the use of standards-related measures as protectionist tools by governments by establishing a framework of common rules by which product regulations and conformity assessment procedures should be developed and applied, and by which products are tested and certified for conformity with those regulations. While non-discrimination is the cornerstone of the Agreement, other key principles include:



(1) an obligation that governments should participate in the development of international standards and use international standards (such as those of the ISO) in order to achieve their regulatory objectives -- this will maximize trade, promote economies of scale and minimize disguised protectionism and unnecessary obstacles to international trade; and,

(2) recognition that due to legitimate regulatory objectives, it may not always be possible or appropriate to use an international consensus standard, but due consideration should be given to that possibility and to the comments received from others in developing the final regulation.

The Agreement also contains a number of procedural obligations designed to achieve transparency in the development and application of standards-related measures; and, in turn, to foster international harmonization.

The United States implemented this Agreement through the Trade Agreements Act of 1979. That Act specifically calls upon all federal agencies to consider the use of international standards for their domestic purposes. It also establishes specific responsibilities for the USTR (as previously noted), and the Departments of Commerce and Agriculture who provide important support as conduits of information under the Agreement. The policy guidance issued by the Office of the Management and Budget in OMB A-119 has been a useful complement to that legislation to increase the awareness of federal agencies to the importance of participating in the development of international standards and their use domestically.

As a result of the Uruguay Round of multilateral trade negotiations, a new agreement on technical barriers to trade has been concluded which will go into effect upon implementation of the World Trade Organization (WTO). While the key provisions of the Agreement are not significantly different, they have been updated and expanded to enhance further the prevention of technical barriers to trade. For example, while the existing Agreement speaks only of test methods and certification systems, the revised Agreement recognizes the current complexity of conformity assessment procedures and will clearly cover any procedure used directly or indirectly to determine that a product complies with a standard or technical regulation. Governments are now not only encouraged to accept test results performed by bodies in other signatory countries, but also the results of other procedures such as quality system registration, inspection,

laboratory accreditation, and product certification. This is greatly facilitated if the standards and regulations themselves are harmonized or have a common basis in international standards. Even where regulations differ, if an exporting country can demonstrate to the importing country that the differing requirements meet the regulatory objectives (i.e., are equivalent), then governments are encouraged to recognize this equivalency.

In addition, there are new provisions which foresee opportunities for additional trade liberalization, such as the encouragement for governments to conclude agreements for the mutual recognition of conformity assessment procedures and thereby eliminate the need for repetitive and costly demonstrations of product conformity. The encouragement to use relevant international standards and guides for technical regulations and conformity assessment procedures remains.

The Uruguay Round negotiations were an enormous undertaking and resulted in the proposed establishment of a World Trade Organization (WTO) which will bind member governments to all of the multilateral trade rules. That means that all Members of the WTO must adhere to the revised Agreement on Technical Barriers to Trade. Thus, we expect that more than 100 countries will adhere to the disciplines of the TBT Agreement as well as the new Agreement on Sanitary and Phytosanitary Measures which applies specifically to measures related to animal and plant life or health. Both of these agreements rely on the development and use of international standards as the primary means of avoiding arbitrary or needless trade barriers and ensuring market access. Over time, the disparities between national standards and regulations should be reduced and the attendant competitive disadvantages. Without a doubt, the importance and relevance of international standardizing bodies, and of effective U.S. participation in those bodies, will grow as a direct result of these commitments. I should add that both the TBT and SPS agreements explicitly protect the right of the United States to take measures necessary for the protection of human, animal or plant life or health, and of the environment, at the levels it considers appropriate, provided the measures do not constitute arbitrary or unjustifiable discrimination.

#### **B. North American Free Trade Agreement (NAFTA)**

The North American Free Trade Agreement contains provisions to address the use of technical requirements as non-tariff barriers. The NAFTA Chapters on Standards and Sanitary and Phytosanitary Measures are modeled after, and build upon, relevant provisions

of the Uruguay Round and elements of the U.S.-Canada Free Trade Agreement. The key difference here is in the nature of the agreement: trilateral rather than multilateral or bilateral. It expressly commits the respective governments to work toward greater compatibility in their regulatory requirements.

At the regulatory level, specific working groups have been established to review regulations with a view toward minimizing any arbitrary or unnecessary divergences between the three countries. These working groups will include technical experts from the governments, and may also include private sector participants. Due to interest expressed by industry during the negotiations, four working groups are established in the Agreement to undertake specific work programs:

- Land Transportation Standards Subcommittee;
- Telecommunications Standards Committee;
- Automotive Standards Council; and,
- the Subcommittee on Textile and Apparel Labeling.

The work of these groups and any others which might be established will be overseen by a Committee on Standards-Related Measures. This trilateral Committee will also monitor implementation of the Chapter's provisions generally (e.g., the systems for information exchange and cooperation) and it will provide a venue to facilitate the resolution of disputes.

#### C. Negotiations with the European Union on Mutual Recognition Agreements

As noted above, mutual recognition of conformity assessment procedures is foreseen under the WTO TBT Agreement as a means of facilitating trade. In order to improve market access for U.S. exports to the European Union in regulated sectors, the U.S. Government and the EU Commission have entered into negotiations regarding possible agreements which would provide for the acceptance, on a reciprocal basis, of test results and product certification systems. The aim of such agreements is to enhance market access on a reciprocal basis by reducing costs associated with demonstrating product conformity to regulations, e.g., testing, inspection and certification.

In a number of important sectors, the business community is actively supporting the negotiation of MRA's. These sectors include telecommunications terminal equipment, medical devices, pharmaceuticals, and pressure equipment. MRA's are viewed by industry to be particularly valuable where there are a wide range

of products and where technological development is rapid, resulting in new products entering the marketplace. Also, with tariffs being reduced or eliminated as a result of the Uruguay Round, product approval requirements are viewed as potential impediments that could reduce the level of market access that will actually be achieved in the EU. U.S. testing and certification organizations are also supportive of this initiative.

The EU received its negotiating mandate for MRA's last December and has identified the United States, Canada, Japan, and Australia/New Zealand as priority countries for concluding agreements. The United States has held two rounds of negotiations with the EU, and a third is planned for the Fall. Past discussions have centered on technical and regulatory aspects of MRA's related to the specific sectors, as well as cross-cutting issues such as enforcement, rules of origin, and electrical safety.

The U.S. delegations have included participation from a broad spectrum of government agencies, including the Department of Commerce and a number of regulatory officials: FDA, FCC, EPA, OSHA, PHWA, as well as private sector representatives of the telecommunications and pressure equipment industries, including associated testing and certification organizations.

At the September 9-11 Quad Ministerial (Trade Ministers of Japan, the EU, Canada, and the United States) held in Los Angeles, the issue of mutual recognition was discussed and it was agreed that this was an appropriate topic for further consideration, as part of an effort to further enhance trade liberalization. Senior officials from these countries will meet again to consider further steps prior to next year's G-7 Summit in Halifax.

#### D. GATT Accessions

While more than 100 countries who are currently GATT contracting parties are likely to ratify and implement the WTO, there are some key countries which must first demonstrate their commitment to free trade by negotiating tariff reductions and making institutional changes in order to become new members of the WTO. Twenty-one countries are in various stages of negotiating their accession to the GATT, including the People's Republic of China, Chinese Taipei and Russia. Ensuring that potential WTO members can effectively fulfill their obligations under the WTO TBT and SPS Agreements is a key component of the U.S. negotiating strategy.

## E. Asia Pacific Economic Cooperation (APEC)

The United States and seventeen<sup>2</sup> other countries in the Asia Pacific region have embarked on a discussion of ways to increase economic cooperation and liberalize trade and investment in the region. At the Ministerial hosted by the United States last year in Seattle, Ministers agreed upon a trade policy role for APEC and established a permanent committee on trade and investment. Part of the Trade and Investment Work Program included the task of defining APEC's role in contributing to harmonized standards and conformity assessment arrangements. Three informal meetings of standards and trade policy experts have been held this year with a view to providing Ministers with some concrete recommendations. In addition to establishing a framework for APEC cooperation on Standards (which is largely reflective of the multilateral TBT and SPS Agreements), it is expected that in the near term, analytical work on the relationship between national regulations and international standards will be undertaken, and the concept of mutual recognition discussed and defined, with a view toward advancing such agreements in the regulatory sector among interested parties in the region.

### Future Challenges

As you can see, Mr. Chairman, standards, technical regulations and conformity assessment procedures are an important component of our trade policy and market access negotiations with foreign governments. USTR is frequently called upon to explain and defend the legitimacy of specific regulations maintained by U.S. regulatory agencies, and the complexity of our decentralized voluntary standardization system, given our heavy reliance on it in ensuring the safety and quality of our products. We are confident, given our domestic legal context, that our regulators and the voluntary standardization community do not engage in the creation of technical barriers to trade as defined by our trade agreements. And, we are best able to respond to requests for information and potential challenges when we secure the cooperation and expertise of individual regulatory agencies and the private sector standards community.

USTR's perspective is by and large oriented toward securing the

<sup>2</sup> Australia, Brunei Darussalam, Canada, Chile, the People's Republic of China, Hong Kong, Indonesia, Japan, the Republic of Korea, Malaysia, Mexico, New Zealand, Papua New Guinea, the Republic of the Philippines, Singapore, Chinese Taipei (Taiwan), Thailand, in addition to the United States.



basis for fair competition for U.S. products in foreign markets, and the focus of our trade agreements is more on the prevention of technical trade barriers in the form of government-mandated requirements, and less on the strategic use of voluntary standardization. As I have noted, the importance of international standards is recognized in a number of trade agreements and their use, and our participation in their development, is but one of our responsibilities under the trade agreements; under the Trade Agreements Act of 1979, the encouragement for federal agencies to consider the use of international standards became a domestic legal obligation.

Given the increasing competitive challenges facing our firms today, more than ever it is important for the Federal government and private sector to work together to ensure that international standards reflect U.S. marketplace and regulatory needs. Within the government, we rely heavily on the ongoing contacts we have established in the TPSC process; in relations with the private sector, we rely on the advice provided by the IFAC on Standards and often call upon individual members to participate with us in our discussions with foreign governments. We also look to individual trade associations, standards developers, certification bodies, and individual companies to make us aware of potential technical barriers to trade in foreign markets and to assist us in their resolution. We work cooperatively with the American National Standards Institute (ANSI), as the member body of the International Organization for Standardization and the International Electrotechnical Commission, and look to them to be a focal point and representative for United States interests -- both private sector as well as government -- in those international organizations.

Finally, we heartily support the role of the National Institute of Standards and Technology in coordinating domestic implementation of OMB A-119. Effective implementation of the requirements in that circular and greater awareness among Federal agencies of the importance and relevance of international standards is an important complement to our efforts to ensure effective market access for U.S. products abroad.

Thank you, Mr. Chairman.

Coordination of Trade Policy

Under the Trade Expansion Act of 1962, the President established an interagency trade policy mechanism to assist with the implementation of these responsibilities. This organization, as it has evolved, consists of three tiers of committees that constitute the principle mechanism for developing and coordinating U.S. Government positions on international trade.

The Trade Policy Review Group (TPRG) and the Trade Policy Staff Committee (TPSC), administered and chaired by USTR, are the subcabinet interagency trade policy coordination groups that are central to this process. The TPSC is the first line operating group, with representation at the senior civil servant level. Supporting the TPSC are more than 60 subcommittees responsible for specialized areas.

Through the interagency process, USTR assigns responsibilities for economic analysis to members of the appropriate TPSC subcommittee. Conclusions and recommendations of this group are then presented to the full TPSC and serve as the basis for reaching interagency consensus. If agreement is not reached in the TPSC, or if particularly significant policy questions are being considered, issues are taken up by the TPRG (Deputy USTR/Under Secretary level).

Member agencies of the TPRG and the TPSC consist of the Departments of Commerce, Agriculture, State, Treasury, Labor, Justice, Defense, Interior, Transportation, and Energy, the Office of Management and Budget, the Council of Economic Advisors, and the International Development Cooperation Agency; the National Economic Council and the National Security Council have a joint representative. The U.S. International Trade Commission is a non-voting member of the TPSC and an observer at TPRG meetings. Representatives of other agencies also may be invited to attend meetings depending on the specific issues discussed.

The final tier of the interagency trade policy mechanism is the National Economic Council (NEC). Chaired by the President, the NEC is composed of the Vice President, the Secretaries of State, the Treasury, Agriculture, Commerce, Labor, Health and Human Services, Housing and Urban Development, Transportation, and Energy, the Administrator of the Environmental Protection Agency, the Chair of the Council of Economic Advisors, the Director of the Office of Management and Budget, the USTR, the National

Security Advisor and the Assistants to the President for Economic Policy, Domestic Policy and Science and Technology Policy. All executive departments and agencies, whether or not represented on the Council, coordinate economic policy through the Council. The NEC Deputies Committee considers decision memoranda from the TPRG, as well as particularly important or controversial trade-related issues.

During the interagency review stage, advice is also sought from the private sector and state government advisory committees and from Congress. While virtually all issues are developed and formulated through the interagency process, USTR advice in some cases, may differ from that of the interagency committees. We believe this process has served the Federal government well and allowed USTR to carry a position to the negotiating table that is broadly representative of the national interest.

As policy decisions are made, USTR assumes responsibility for directing the implementation of that decision. Where desirable or appropriate, USTR may delegate the responsibility for implementation to other agencies.

Mr. VALENTINE. Thank you, sir.

Mr. Hausker.

Mr. HAUSKER. Good morning, Mr. Chairman and members of the subcommittee. Thank you for inviting me here to address this very important subject. I welcome the opportunity to talk about EPA's participation in national and international standards setting and how we believe such standards will benefit both environmental and trade objectives.

Let me begin by saying that EPA participates in a variety of voluntary standards-setting activities, particularly those related to environmental quality. However, I will not focus on the process of setting national and international standards; that has been addressed by some of my colleagues. What I will do is concentrate on the relationship between trade and the environment and how standard setting offers the opportunity to improve the competitiveness of U.S. industry and promote environmental protection.

One of the most significant changes in recent years has been the realization that environmental protection and trade liberalization are not mutually exclusive goals; in fact, they must go hand in hand in order to create jobs and economic growth and protect our land, air, and water. EPA is working diligently to better integrate environmental policy and trade policy. This is illustrated by a number of things.

We have an environment and trade task force at EPA that draws members from all offices to coordinate our policy internally. Last year we became members of two key interagency groups relating to trade matters, the Trade Policy Review Group and the Trade Policy Steering Committee. And, finally, I think it is worthy of note that EPA and other environmental agencies such as Interior and NOAA are full partners in the U.S. Government's participation in the newly formed Committee on Trade and Environment as part of the World Trade Organization, and I think we are rather unique in that that the U.S. Government is coming with both trade and environmental agencies in an equal partnership compared to how some other countries are dealing with their participation in the Committee on Trade and Environment. Overall, we have an excellent working relationship with USTR and have been very active in developing positions on both NAFTA and GATT.

Achieving a better integration of environment and trade policy is one of several reasons why EPA is going beyond its traditional regulatory role to develop more effective partnerships with U.S. business and industry. Over the past few years EPA has discovered that it can achieve its environmental objectives in many cases by working collaboratively with industry and other stakeholders. Recent success stories include the Green Lights Program promoting energy-efficient lighting; the 3350 Program, a cooperative effort with industry to reduce releases of toxic chemicals, and both of these programs are very successful and illustrative of the kind of voluntary partnerships that we believe can achieve many of our goals.

Another key example of this is EPA's new Common Sense Initiative. In this program, Administrator Browner has launched a whole new approach to environmental protection that replaces the pollutant-by-pollutant approach of the past with an industry sector-based

approach. Government officials at all levels, environmentalists, and industry leaders are going to come together to create and develop strategies that will achieve cleaner, cheaper, and smarter environmental protection.

The success we have had collaboratively with industry suggests that the voluntary standards area offers some opportunities to both improve environmental quality and our competitiveness. Our bottom line is that we are making efforts to achieve our goals with these new and nontraditional policy tools while acknowledging that EPA is still principally engaged in the development, implementation, and enforcement of regulations.

Let me summarize some of our standards-related work beginning at the national level. More than 250 agency experts participate in developing product and testing standards through organizations such as the ASTM, the American Society for Testing Materials; the American Society of Quality Control; and the NSF, the National Sanitation Foundation.

For example, in our Office of Solid Waste, EPA personnel work with ASTM to develop standard practices applicable under the Resource Conservation and Recovery Act. In our Office of Research and Development, voluntary standards are used as the basis for standard analytical and sampling methodologies as well as laboratory certification. More than just a cost savings vehicle, the voluntary standards process can mean an alternative to a burdensome regulatory process.

In the case of additives for water quality, the agency successfully turned to the NSF to produce national consensus standards. These were codified as ANSI standards 450 and 451. The agency values the national consensus process as set forth by ANSI and as used by NSF and others because the process is based on principles similar to the regulatory process—that is, stakeholder participation, openness, and balancing of interests.

In another example, through our Environmental Technology Initiative, EPA is providing grant funding to ANSI to help reach small and medium sized businesses in the U.S. and let them know about the voluntary standards system in general and specifically about the newly formed International Committee on Environmental Management Systems which I will speak more about in just a minute. U.S. competitiveness is enhanced by better understanding by business of what is happening in the global market, and we think Government has a role to play there.

Turning now to the international arena, EPA works, for example, with the OECD to develop international harmonized guidelines for chemical testing. By seeking means to harmonize these testing requirements, EPA can work jointly with other countries to develop a standardized data set containing health and environmental effects information on chemicals of concern and to share the cost of testing.

EPA is also very active in the International Organization for Standardization, or ISO. Agency personnel are key members of several technical committees, including those for statistically-based measurement systems, air quality systems, and environment management systems, and that is what I would like to expand on just a bit.



ISO's Technical Committee on Environmental Management Systems, or TC-207, is an ambitious international project driven partly by environmental concerns and mostly by economic and trade issues. Still, the committee is developing guidelines and standards in areas of particular interest to the agency including environmental auditing and eco-labeling. It is an opportunity to help put environmental standards and principles into international use. Such standards can establish the precedence for harmonized international environmental consideration in products and processes where there have not been any or where, as in the case of eco-labeling, there is a wide variety of programs with different criteria and methodologies.

In 1993 EPA created a standards network within the agency to assure development and coordination of agency positions as part of the TC-207 process. This network administers the agency's official participation in TC-207 and coordinates with offices throughout EPA.

I do want to caution against overselling the ability of international standards to substitute for other tools the EPA uses to improve environmental quality. There will always be a need for our traditional policy menu of education, technical assistance, regulations, and enforcement. We at EPA need to consider which tools at our disposal can most effectively achieve our goals, and it may be that voluntary international standards are not always the answer but they often can be very helpful. We believe that in general the standards arena offers an opportunity to promote pollution prevention and the consideration of environmental impacts in an industrial operation.

I would like to conclude my remarks today by touching on the issue of coordination of U.S. positions in international standards fora, something that other folks have commented on too. Given the complexity and diversity of issues dealt with in these fora, it is important that various Government agencies maintain their relationships with ISO, OECD, and other organizations. Nevertheless, the converging interests among Government agencies and industry in international areas such as eco-labeling and mutual recognition guidelines call for very effective coordination throughout the U.S. Government, as some of my colleagues have advocated also.

Thank you for this opportunity, and I will be happy to answer any questions.

[The prepared statement of Mr. Hausker follows:]

STATEMENT OF  
DR. KARL HAUSKER  
DEPUTY ASSISTANT ADMINISTRATOR  
OFFICE OF POLICY, PLANNING AND EVALUATION  
U.S. ENVIRONMENTAL PROTECTION AGENCY  
BEFORE THE  
COMMITTEE ON SCIENCE, SPACE AND TECHNOLOGY  
SUBCOMMITTEE ON TECHNOLOGY, ENVIRONMENT AND AVIATION  
U.S. HOUSE OF REPRESENTATIVES

SEPTEMBER 22, 1994

Good morning, Mr. Chairman and members of the Subcommittee. Thank you for inviting me to address the Subcommittee on this important subject. As vice-chair of the U.S. Environmental Protection Agency's Environment and Trade Task Force, I welcome the opportunity to talk about EPA's participation in national and international standards setting and how we believe such standards will benefit environmental and trade objectives.

Introduction

Let me begin by saying that EPA participates in a variety of voluntary standard setting activities, particularly those related to environmental quality. However, I will not focus on the process of setting national and international standards. In my statement, I'll concentrate on the relationship between trade and the environment, and how standard setting offers the opportunity to improve the competitiveness of U.S. industry and promote sustainable economies. I will leave discussion of the more

technical issues of standard setting policy to the other experts at the table.

### Environment and Trade

One of the most significant changes in recent years has been the realization that environmental protection and trade liberalization are not mutually exclusive goals. In fact, they must go hand in hand in order to create jobs and economic growth, and protect our land, air, and water.

EPA is working hard to ensure U.S. authorities protecting health and environmental standards remain intact, while encouraging trade through international cooperation and upward harmonization of all standards.

### Common Sense and Good Business

Innovation and experimentation bring me to the second point. As trade and competitiveness are bound to environmental as well as economic growth, the Agency is going beyond its traditional regulatory role to develop more effective partnerships with U.S. business and industry.

Over the past few years, the EPA has discovered that it can achieve its environmental objectives in many cases by working collaboratively with industry and other stakeholders. Recent success stories include the Green Lights Program that promotes

energy efficient lighting, and EPA's 33/50 Program, a cooperative effort with industry to reduce releases of toxic chemicals by 50% by 1995 -- a goal we're well on the way to achieving.

A prime example of this is EPA's new Common Sense Initiative. With this initiative, Administrator Browner has launched a whole new approach to environmental protection that replaces the pollutant-by-pollutant approach of the past with an industry-by-industry approach. Government officials at all levels, environmentalists, and industry leaders will come together to create strategies that will work cleaner, cheaper and smarter to protect the health of the people of this country and the natural resources we all share.

The Common Sense Initiative will give industry the incentives and flexibility to develop innovative technologies that meet and exceed environmental standards while cutting costs.

The success we've had working collaboratively with industry suggests that the voluntary standards area offers some opportunities to both improve environmental quality and international industrial competitiveness.

#### Standards & Standardization: Tools of the Trade

EPA is principally engaged in the development, implementation and enforcement of regulatory standards.

Regulation alone will not get the U.S. or the world where we need to go in terms of human health and the environment. Two-way communication is the obvious key: stakeholder involvement in the regulatory process and government participation in fora such as the voluntary standards system.

#### National

Let me begin with our efforts at the national level. More than 250 Agency experts participate in developing product and testing standards through organizations such as the American Society for Testing and Materials (ASTM), the American Society of Quality Control (ASQC), and the National Sanitation Foundation (NSF). For example, in our Office of Solid Waste, EPA personnel work with ASTM to develop standard practices applicable under the Resource Conservation and Recovery Act. In our Office of Research and Development, voluntary standards are used as the basis for standard analytical and sampling methodologies as well as laboratory certification.

More than just a cost savings vehicle, the voluntary standards process can mean an alternative to a burdensome regulatory process. In the case of additives for water quality, the Agency successfully turned to the NSF to produce National consensus standards (American National Standards Institute (ANSI) Standards 450 & 451). The Agency values the National consensus process as set forth by ANSI and as used by NSF and others



because the process is based on principles similar to the regulatory process, that is: stakeholder participation, openness, and balance.

Through the Environmental Technology Initiative, EPA is providing grant funding to ANSI to help reach small and medium size businesses in the U.S. and let them know about the voluntary standards system in general and, specifically, about the newly formed international committee on environmental management systems. U.S. competitiveness is enhanced by better understanding of what is happening in the global market.

#### International

Turning now to the international arena, EPA works, for example, with the Organization for Economic Development (OECD) to develop international harmonized guidelines for chemical testing. By seeking means to harmonize testing requirements, EPA can work jointly with other countries to develop a standardized data set containing health and environmental effects information on chemicals of concern, and share the cost of testing.

EPA is also very active in the International Organization for Standardization, or ISO. Agency personnel are key members of several technical committees, including those for Statistical Based Measurement Systems (TC-59), Air Quality (TC-146), Quality Systems (TC-176), and Environmental Management Systems (TC-207).

Let me expand a bit on this last one. ISO's Technical Committee on Environmental Management Systems, or TC-207, is an ambitious international project driven partly by environmental concerns and mostly by economic and trade issues. Still, the Committee is developing guidelines and standards in areas of particular interest to the Agency including Environmental Auditing and Eco-labeling. It is an opportunity to help put environmental standards and principles into international use. Such standards can establish the precedents for harmonized, international environmental considerations in products and processes where there have not been any or where, as in the case of eco-labeling, there is a wide variety of programs with different criteria and methodologies.

In 1993 the Administrator supported the initiation of an informal Standards Network within the Agency to assure development and coordination of Agency positions to be part of the TC-207 process. The Network administers the Agency's official participation in TC-207 and coordinates with Offices throughout EPA. There is no guarantee that EPA's voice will sway the U.S. input on any particular issue within the TC-207, but the Network helps assure the strongest possible Agency-wide backing.

I would caution against overselling the ability of international standards to substitute for other tools the EPA uses to improve environmental quality. There will always be a

need for our more traditional policy menu of education, technical assistance, regulations and enforcement. We at EPA need to consider which tool(s) at our disposal can most effectively achieve our goals, and it may be that voluntary international standards are not always the answer. We believe that in general, the standards arena offers an important opportunity to promote pollution prevention and the consideration of environmental impacts in industrial operations, and to the extent resources allow, we will continue to participate in them.

#### Concluding Remarks

I'd like to conclude my remarks today by touching on the issue of coordination of U.S. positions in international standards fora. As trade and environmental, economic and health issues are slowly converging, it is imperative that the distinct character of each U.S. Government agency retains its strength in relationship with ISO, OECD, and other organizations. It's hard to imagine consolidating such activity in a single organization. On the other hand, converging interests among Government Agencies and U.S. industry in international areas such as eco-labeling and mutual recognition guidelines call for effective coordination throughout the government.

Thank you for providing this opportunity to discuss these matters. I'll be happy to answer any questions.

Mr. VALENTINE. Thank you, sir.

Mr. Mazza.

Mr. MAZZA. Thank you, Mr. Chairman.

On behalf of the ANSI Federation, I want to thank you for all that you have done for the United States voluntary standards system throughout the years. We appreciate how much effort you have put into becoming familiar with the very complex world of standards. That you have done so and have brought standards issues to the attention of Congress and particularly your sponsoring of the NRC study is commendable, and we appreciate it.

I am here not on behalf of the small staff that serves the community but on behalf of the community itself. I am talking about hundreds—actually, thousands of companies and individuals who participate in the process, hundreds of organizations, professional societies, trade associations, that facilitate that process, and many other institutions from labor and academia, and, last but certainly not least, Government agencies themselves that participate.

ANSI is not only this community but it is also the recognized U.S. representative to the two major nontreaty international standards issuing organizations, the International Organization for Standardization and, through our committee, the U.S. national committee, the International Electro-technical Commission.

In a rapidly changing world, the community has had to face much change. We have made much progress in the past year in doing what Dr. Prabhakar of NIST described as leaving our old baggage at the station, neither denying its existence nor letting it impede our progress. We have shown willingness to change on the part of everyone within the standards community, SDO's, Government agencies, companies, and this subcommittee and its staff in particular have been very instrumental in that change. This new spirit of working together has led us to projects such as the National Standards Systems Network, the Information Infrastructure Standards Panel, which were already referred to earlier today, good work done together with the EPA related to international environmental management systems, just to name a few.

Although our federated system sometimes is difficult to understand, and particularly for those abroad, it reflects the pluralistic nature of our society and has proven to be extremely effective, particularly when one recognizes that many U.S. voluntary national standards are de facto world standards. In this way the ANSI Federation has responded to the challenge of a competitive global marketplace, providing a leading role in the major international standards arena, and again my written testimony describes some of this in more detail.

Very important to us is Federal Government participation in and support for the ANSI Federation. It is technical. We have Federal experts that participate in thousands of technical committees in hundreds of standards developing organizations within the ANSI Federation. It is international. We work very closely with the Office of the U.S. Trade Representative, the Department of Commerce, and the State Department. On ANSI's board of directors we have the Defense Department, the Energy Department, the EPA, the Consumer Products Safety Commission, Food and Drug Administration, Office of Consumer Affairs, and the director of NIST has

the only permanent seat on the ANSI board. The Government is a very important part of our policy making.

Business wants Federal participation in private sector standardization activity both domestically and internationally. They want full participation in the standards development process on technical committees. Both the private sector and the Government benefit from sharing their technical expertise with each other. This results in procurement agencies such as the Defense Department and General Services Administration lowering their costs and helping U.S. industry. It results in regulatory agencies such as the FDA and the Consumer Products Safety Commission being able to adopt or cite our standards rather than developing new Federal regulations.

What ANSI needs from Government as we move forward is continued active participation and, in particular, congressional support for OMB Circular A-119. We need support for increased programs aimed at education and training. Our effectiveness in international standards is a function of our participation. Where we participate, we generally do so very successfully. Where we do not participate, we quite simply suffer the consequences. The technical expertise exists in industry and in Government, but we must bring that expertise to these committees.

We need more visible Government support for our international efforts to secure foreign government recognition of our U.S. private sector conformity assessment activities. And, lastly, we need a formal Government recognition of ANSI's role.

Mr. Chairman, I would like to summarize by mentioning that standards is not a partisan issue, it is a public service issue that benefits all of us, and with that last remark I would like to thank you for your time.

[The prepared statement of Mr. Mazza follows:]





**American National  
Standards Institute**

11 WEST 42ND STREET, NEW YORK, NEW YORK 10036

TEL: 212 642 4800

FAX: 212 398 0023

Cable: Standards New York

International Telex: 42 42 96 ANSI UI

D-U-N: S 07 329-4837

**International Standards And U.S. Exports:  
Keys To Competitiveness Or Barriers To Trade**

**Testimony by Sergio Mazza  
President, American National Standards Institute  
before the  
Committee on Science, Space and Technology  
Subcommittee on Technology, Environment and Aviation**

**September 22, 1994**

Thank you, Mr. Chairman. It is a pleasure to participate in this very important Congressional hearing on international standards and their impact on the United States' global competitiveness.

First, on behalf of the ANSI federation, I want to thank you for all you have done for the United States voluntary standards system throughout the years. As a relative newcomer to this community, I can appreciate how much effort you put into becoming familiar with the very complex world of standards. That you have done so, and have brought standards issues to the attention of the Congress, is commendable. We in the standards community appreciate it. We wish you well in your retirement.

The voluntary standardization system in the United States is the most effective and efficient in the world. For more than 75 years, this system has been administered and coordinated by the private sector through ANSI, with the cooperation of federal, state and local governments. ANSI does not write standards; it serves as a catalyst for standards development by its diverse membership. The Institute is a unique partnership of approximately 1,300 companies, 250 professional, technical, trade, labor, academic and consumer organizations and some 30 government agencies. These members of the ANSI federation actually develop standards or otherwise participate in their development, contributing their time and expertise in order to make the system work. ANSI also is the United States representative to the two major, non-treaty international standards

organizations: The International Organization for Standardization (ISO) and, through the United States National Committee, the International Electrotechnical Commission (IEC).

The new global competitive environment and the role of international standards permeate the U.S. economy. This hearing covers several critical issues which are important to every aspect of American life. For purposes of simplification, I will focus my comments on the standards setting process, international competitiveness, conformity assessment, the information infrastructure, and environmental and healthcare related standards because they provide a good platform from which to address the issues within a short time frame.

#### **THE STANDARDS SETTING PROCESS**

The voluntary standards process has proven its effectiveness across a diverse set of industries. These industries include telecommunications, safety and health, information technology, petroleum, banking and household appliances. Attention to the marketplace is a key component of the process. These efforts continue today and are being applied to new critical areas such as the environment and healthcare.

How standards are developed and established is a more important question than which standards may result. The process for developing standards must be in harmony with the needs of consumers, manufacturers and regulators alike for the outcome to be optimal and meet the needs of society as a whole.

Experience has proven that, in the United States, standards developed through an open, nondiscriminatory, voluntary, private-sector led, consensus process are the standards which have the widest acceptance and greatest utility. This is because they were generated TO MEET USER NEEDS.

Without question, the active participation and support of government has been a major contributing factor to this success. We believe that it is significant that Defense Secretary William J. Perry recently announced that the Department of Defense will use

private sector standards in lieu of military specifications unless no practical alternative exists to meet the user's needs. Secretary Perry has stated that "this is one of the most important actions the Defense Department can take to meet the nation's military, economic, and policy objectives." By increasing its participation in and reliance on the voluntary standards community, government can reduce both the need for federal regulation and its related costs.

Federal Communications Commission Chairman Reed Hundt recently commented that he did not believe "that the public wants government to pick its favorite network for development. The public does not want government to choose among different proposals for technological innovation of the networks. I agree with the public. Instead, competition should determine who wins. Our role is to referee the game. As a referee, I prefer -- just as they do in the NBA playoffs -- to let the players play." The ANSI federation agrees.

We believe the decisions of these and other federal regulatory agencies reinforce the concept of a voluntary standards process which protects health and safety, promotes economic growth and strengthens the United States' position in global markets.

#### INTERNATIONAL COMPETITIVENESS

In today's global economy, internationally recognized standards are increasingly important. Global standards offer greater compatibility and economic benefits by reducing barriers to trade, lowering product development costs and improving the United States' global competitiveness. Standards and certification issues determine market access and technology-based competitive advantage. The ANSI federation has responded to the challenges of a competitive global marketplace by taking a leading role in the major international standards arenas.

Nonetheless, the role of standards in a global business environment is often overlooked or misunderstood. I believe the real contribution of standards within a global

economy was best described in a recent speech by I. MacAllister Booth, the President and Chief Executive Officer of Polaroid. He said, "Standards are what make it possible for someone from Canada to buy a camera in the United States, load it with film made in Japan, take a photograph in Brazil, and have the film developed in France. Without standards, none of this would be possible." Standards, and testing and certification -- so called conformity assessment issues -- are replacing tariffs as the new trade issues of the 1990's.

International standards still need more recognition by United States corporate and political leaders. We see progress in moving the standards issues from the backroom to the board room. However, while many of our corporate leaders understand that the marketplace has expanded beyond U.S. borders, many still do not recognize the crucial effect international standards has on our competitive posture. Increased programs aimed at education and sponsored by the federal government are vital tools that would go a long way toward ensuring greater private and public sector participation in international standards efforts and an optimal allocation of resources.

#### CONFORMITY ASSESSMENT

International standards that reflect U.S. technology and that U.S. producers can meet are key to maintaining our competitiveness in the post "Uruguay Round" international trade environment. But the methods of testing and certification through which products are shown to meet specific standards -- known as "conformity assessment" -- are becoming as important as the standards themselves. Our goal here is to achieve worldwide acceptance of suppliers' declarations of conformity, product certifications, quality system registrations and laboratory test results conducted in the United States.

We believe there is a compelling need to reinforce the existing ANSI federation cooperation with NIST and the Office of the United States Trade Representative. Achieving this goal requires government action in some markets and private sector action

in others. For example, the Standards Council of Canada participates in the Government of Canada's conformity assessment negotiations with the European Commission and the NAFTA Committee on Standards Related Measures. In the European community, governments rely upon private sector accreditations to determine the competence of certification organizations. ANSI would welcome more visible government support for our international efforts to secure recognition for U.S. assessments of conformity.

#### **INFORMATION INFRASTRUCTURE**

The information infrastructure encompasses a vast array of services and communications modalities. It is not a new invention, however. Most of the interfaces that enable information infrastructure interoperability have been developed by the voluntary standards community through the cooperation of a wide spectrum of industries and interests. Requirements for new standards and interfaces are being addressed by the Institute's newly formed Information Infrastructure Standards Panel (IISP) which will have its second meeting in Washington, D.C. on September 27-28, 1994. This Panel's mission is to promote, accelerate and coordinate the timely development of required national and global information infrastructure standards.

In addition to the activities of the Panel, the ANSI federation and the National Institute for Standards and Technology (NIST) have entered into an agreement to begin the development of an electronic information infrastructure, the National Standards System Network (NSSN). This Standards Network will link the databases of the hundreds of organizations involved in the development, production, distribution and use of technical standards in the United States. It will reduce standards development time, minimize duplication of effort and decrease production costs. Representatives of the international standards community are active participants in Standards Network with the objective of global compatibility.



## ENVIRONMENT AND HEALTHCARE

Protection of the environmental and natural resources is another significant subject that currently is being addressed through voluntary standardization efforts. The ANSI federation has been working for almost two years with strong cooperation and active participation from the Environmental Protection Agency, the Department of Energy and NIST to ensure that the United States provides leadership direction in the International Standardization Organization's international effort to develop a useful body of environmental management standards. The intent of the International Standardization Organization's Technical Committee 207 is to create basic, uniform standards that can assist companies and organizations in effectively and efficiently achieving their environmental objectives and obligations. In designing these environmental management tools and systems, the Technical Committee intends to focus on and safeguard against potential negative impacts on trade and commerce. To date, the United States, through the ANSI federation, has successfully promoted U.S. interests in this activity. The United States holds a number of significant leadership positions in this international effort. It is our intent to continue this positive momentum through proactive organization and cooperation between the private and public sectors in the United States.

In the area of healthcare, we all recognize the crucial need to improve healthcare delivery and costs. Working with the private and public sector, the ANSI federation has established a Healthcare Informatics Standards Planning Panel which is working to coordinate and stimulate voluntary consensus standards which will improve the overall quality of life for all Americans. There has been significant progress but much remains to be accomplished. We have no doubt the voluntary consensus process will once again demonstrate its unique ability to achieve its goals.

### WHAT ABOUT THE FUTURE?

Government and the private sector have established a unique partnership which has proven its ability to be flexible while continuing to improve Americans' economic well being and quality of life. Our joint challenges and tasks never end -- in fact, they are expanding as we continue to enhance the United States' position in the global market.

The ANSI federation is taking the lead role in the preparation and execution of a program for developing countries on Metrology, Standardization, Testing and Quality (MSTQ). We already have sent a consultant to advise the Trinidad and Tobago Bureau of Standards in connection with conformity assessment issues. Dr. Peter Heydemann, Director of Technology Services at NIST, has offered to plan a workshop with the ANSI federation in late 1994 or early 1995 to consider a government/private sector partnership to provide expertise and services to developing countries. Such assistance will have long-range benefits for both the recipients and for U.S. trade and international competitiveness. Dr. Heydemann also has invited us to work with NIST in connection with its new "Standards in Trade Program", which was created by Congress to assist U.S. industry in overcoming non-tariff barriers to trade. This program is aimed in large part at offering training and developing significant contacts in emerging markets such as Mexico, China, Indonesia, Argentina, Brazil and Poland.

The ANSI federation and NIST, under the direction of Dr. Arati Prabhakar, recognize the need and value of working cooperatively in order to maximize the effectiveness of the U.S. voluntary standards system. In addition, several prominent standards developing organizations such as ASTM, the American Society of Mechanical Engineers, the National Fire Protection Association and the Computer and Business Equipment Manufacturers Association have made substantial efforts to further harmonize the U.S. standards community.

The United States as a nation must continue to increase its involvement in and commitment to national and international standardization. The interest and support of

Congress for the voluntary standards process is vital to the future success of the U.S. economy. The ANSI federation stands ready to ensure this proven partnership will enhance the United States' competitiveness in international trade.

Thank you, Mr. Chairman.

**International Standards And U.S. Exports:  
Keys To Competitiveness Or Barriers To Trade**

**Testimony by Sergio Mazza  
President, American National Standards Institute  
before the**

**Committee on Science, Space and Technology  
Subcommittee on Technology, Environment and Aviation**

**September 22, 1994**

Thank you, Mr. Chairman. It is a pleasure to participate in this very important Congressional hearing on international standards and their impact on the United States' global competitiveness.

First, on behalf of the ANSI federation, I want to thank you for all you have done for the United States voluntary standards system throughout the years. As a relative newcomer to this community, I can appreciate how much effort you put into becoming familiar with the very complex world of standards. That you have done so, and have brought standards issues to the attention of the Congress, is commendable. We in the standards community appreciate it. We wish you well in your retirement.

The voluntary standardization system in the United States is the most effective and efficient in the world. For more than 75 years, this system has been administered and coordinated by the private sector through ANSI, with the cooperation of federal, state and local governments. ANSI does not write standards; it serves as a catalyst for standards development by its diverse membership. The Institute is a unique partnership of approximately 1,300 companies, 250 professional, technical, trade, labor, academic and consumer organizations and some 30 government agencies. These members of the ANSI federation actually develop standards or otherwise participate in their development, contributing their time and expertise in order to make the system work. ANSI also is the United States representative to the two major, non-treaty international standards

organizations: The International Organization for Standardization (ISO) and, through the United States National Committee, the International Electrotechnical Commission (IEC).

The new global competitive environment and the role of international standards permeate the U.S. economy. This hearing covers several critical issues which are important to every aspect of American life. For purposes of simplification, I will focus my comments on the standards setting process, international competitiveness, conformity assessment, the information infrastructure, and environmental and healthcare related standards because they provide a good platform from which to address the issues within a short time frame.

### **THE STANDARDS SETTING PROCESS**

The voluntary standards process has proven its effectiveness across a diverse set of industries. These industries include telecommunications, safety and health, information technology, petroleum, banking and household appliances. Attention to the marketplace is a key component of the process. These efforts continue today and are being applied to new critical areas such as the environment and healthcare.

How standards are developed and established is a more important question than which standards may result. The process for developing standards must be in harmony with the needs of consumers, manufacturers and regulators alike for the outcome to be optimal and meet the needs of society as a whole.

Experience has proven that, in the United States, standards developed through an open, nondiscriminatory, voluntary, private-sector led, consensus process are the standards which have the widest acceptance and greatest utility. This is because they were generated TO MEET USER NEEDS.

Without question, the active participation and support of government has been a major contributing factor to this success. We believe that it is significant that Defense Secretary William J. Perry recently announced that the Department of Defense will use



private sector standards in lieu of military specifications unless no practical alternative exists to meet the user's needs. Secretary Perry has stated that "this is one of the most important actions the Defense Department can take to meet the nation's military, economic, and policy objectives." By increasing its participation in and reliance on the voluntary standards community, government can reduce both the need for federal regulation and its related costs.

Federal Communications Commission Chairman Reed Hundt recently commented that he did not believe "that the public wants government to pick its favorite network for development. The public does not want government to choose among different proposals for technological innovation of the networks. I agree with the public. Instead, competition should determine who wins. Our role is to referee the game. As a referee, I prefer -- just as they do in the NBA playoffs -- to let the players play." The ANSI federation agrees.

We believe the decisions of these and other federal regulatory agencies reinforce the concept of a voluntary standards process which protects health and safety, promotes economic growth and strengthens the United States' position in global markets.

### **INTERNATIONAL COMPETITIVENESS**

In today's global economy, internationally recognized standards are increasingly important. Global standards offer greater compatibility and economic benefits by reducing barriers to trade, lowering product development costs and improving the United States' global competitiveness. Standards and certification issues determine market access and technology-based competitive advantage. The ANSI federation has responded to the challenges of a competitive global marketplace by taking a leading role in the major international standards arenas.

Nonetheless, the role of standards in a global business environment is often overlooked or misunderstood. I believe the real contribution of standards within a global

economy was best described in a recent speech by I. MacAllister Booth, the President and Chief Executive Officer of Polaroid. He said, "Standards are what make it possible for someone from Canada to buy a camera in the United States, load it with film made in Japan, take a photograph in Brazil, and have the film developed in France. Without standards, none of this would be possible." Standards, and testing and certification -- so called conformity assessment issues -- are replacing tariffs as the new trade issues of the 1990's.

International standards still need more recognition by United States corporate and political leaders. We see progress in moving the standards issues from the backroom to the board room. However, while many of our corporate leaders understand that the marketplace has expanded beyond U.S. borders, many still do not recognize the crucial effect international standards has on our competitive posture. Increased programs aimed at education and sponsored by the federal government are vital tools that would go a long way toward ensuring greater private and public sector participation in international standards efforts and an optimal allocation of resources.

### **CONFORMITY ASSESSMENT**

International standards that reflect U.S. technology and that U.S. producers can meet are key to maintaining our competitiveness in the post "Uruguay Round" international trade environment. But the methods of testing and certification through which products are shown to meet specific standards -- known as "conformity assessment" -- are becoming as important as the standards themselves. Our goal here is to achieve worldwide acceptance of suppliers' declarations of conformity, product certifications, quality system registrations and laboratory test results conducted in the United States.

We believe there is a compelling need to reinforce the existing ANSI federation cooperation with NIST and the Office of the United States Trade Representative. Achieving this goal requires government action in some markets and private sector action

in others. For example, the Standards Council of Canada participates in the Government of Canada's conformity assessment negotiations with the European Commission and the NAFTA Committee on Standards Related Measures. In the European community, governments rely upon private sector accreditations to determine the competence of certification organizations. ANSI would welcome more visible government support for our international efforts to secure recognition for U.S. assessments of conformity.

### **INFORMATION INFRASTRUCTURE**

The information infrastructure encompasses a vast array of services and communications modalities. It is not a new invention, however. Most of the interfaces that enable information infrastructure interoperability have been developed by the voluntary standards community through the cooperation of a wide spectrum of industries and interests. Requirements for new standards and interfaces are being addressed by the Institute's newly formed Information Infrastructure Standards Panel (IISP) which will have its second meeting in Washington, D.C. on September 27-28, 1994. This Panel's mission is to promote, accelerate and coordinate the timely development of required national and global information infrastructure standards.

In addition to the activities of the Panel, the ANSI federation and the National Institute for Standards and Technology (NIST) have entered into an agreement to begin the development of an electronic information infrastructure, the National Standards System Network (NSSN). This Standards Network will link the databases of the hundreds of organizations involved in the development, production, distribution and use of technical standards in the United States. It will reduce standards development time, minimize duplication of effort and decrease production costs. Representatives of the international standards community are active participants in Standards Network with the objective of global compatibility.

## ENVIRONMENT AND HEALTHCARE

Protection of the environmental and natural resources is another significant subject that currently is being addressed through voluntary standardization efforts. The ANSI federation has been working for almost two years with strong cooperation and active participation from the Environmental Protection Agency, the Department of Energy and NIST to ensure that the United States provides leadership direction in the International Standardization Organization's international effort to develop a useful body of environmental management standards. The intent of the International Standardization Organization's Technical Committee 207 is to create basic, uniform standards that can assist companies and organizations in effectively and efficiently achieving their environmental objectives and obligations. In designing these environmental management tools and systems, the Technical Committee intends to focus on and safeguard against potential negative impacts on trade and commerce. To date, the United States, through the ANSI federation, has successfully promoted U.S. interests in this activity. The United States holds a number of significant leadership positions in this international effort. It is our intent to continue this positive momentum through proactive organization and cooperation between the private and public sectors in the United States.

In the area of healthcare, we all recognize the crucial need to improve healthcare delivery and costs. Working with the private and public sector, the ANSI federation has established a Healthcare Informatics Standards Planning Panel which is working to coordinate and stimulate voluntary consensus standards which will improve the overall quality of life for all Americans. There has been significant progress but much remains to be accomplished. We have no doubt the voluntary consensus process will once again demonstrate its unique ability to achieve its goals.

### WHAT ABOUT THE FUTURE?

Government and the private sector have established a unique partnership which has proven its ability to be flexible while continuing to improve Americans' economic well being and quality of life. Our joint challenges and tasks never end -- in fact, they are expanding as we continue to enhance the United States' position in the global market.

The ANSI federation is taking the lead role in the preparation and execution of a program for developing countries on Metrology, Standardization, Testing and Quality (MSTQ). We already have sent a consultant to advise the Trinidad and Tobago Bureau of Standards in connection with conformity assessment issues. Dr. Peter Heydemann, Director of Technology Services at NIST, has offered to plan a workshop with the ANSI federation in late 1994 or early 1995 to consider a government/private sector partnership to provide expertise and services to developing countries. Such assistance will have long-range benefits for both the recipients and for U.S. trade and international competitiveness. Dr. Heydemann also has invited us to work with NIST in connection with its new "Standards in Trade Program", which was created by Congress to assist U.S. industry in overcoming non-tariff barriers to trade. This program is aimed in large part at offering training and developing significant contacts in emerging markets such as Mexico, China, Indonesia, Argentina, Brazil and Poland.

The ANSI federation and NIST, under the direction of Dr. Arati Prabhakar, recognize the need and value of working cooperatively in order to maximize the effectiveness of the U.S. voluntary standards system. In addition, several prominent standards developing organizations such as ASTM, the American Society of Mechanical Engineers, the National Fire Protection Association and the Computer and Business Equipment Manufacturers Association have made substantial efforts to further harmonize the U.S. standards community.

The United States as a nation must continue to increase its involvement in and commitment to national and international standardization. The interest and support of



Congress for the voluntary standards process is vital to the future success of the U.S. economy. The ANSI federation stands ready to ensure this proven partnership will enhance the United States' competitiveness in international trade.

Thank you, Mr. Chairman.

Mr. VALENTINE. Thank you, sir, very much. I thank all of you.

Mr. Line, in your testimony you propose that a—quote, a forum is created for effectively resolving the vexing financial issues that more and more must be addressed by both Government and ANSI, unquote—close quote. Can you tell us more about these vexing financial issues that you refer to? And be as specific as you feel that you can, and also, if you can and would care to, suggest to us some realistic solutions. We don't ask much of you.

Mr. LINE. I guess it's times like this that we don't miss the fact that the TV cameras aren't here.

It is a proper question for a forum like this. Unfortunately, I think it is a question that will not be completely answered. I think that it is important from the outset to understand that it is certainly AMP's position and I believe industry's position as a whole that the support from the Government the system needs should be directed at helping the existing system, which has proven itself to be quite effective, to get to where it needs to go, and it would be, I think, a major mistake for any Government support to try to do for us what needs to be done.

Having said that, however, it goes without saying to us in industry that the battle for new sources of revenue and the continued pressures of cost cutting will be with us, and that is true for the world of standardization as well.

I think the two suggestions that drive some stakes into the ground worthy of consideration for Government financing might be to more explicitly support the participation by Government experts, especially perhaps those from NIST in the domestic and global standards making bodies, and something that I think also worthy of consideration might be to participate in the dues payments of ANSI in the international bodies, and I think AMP would be very delighted to hear from our other colleagues on the panel here as to other ways that the Government can help us jointly with this—with the answer to your question. I think too that the forum that we propose between a more formal relationship between AMP and NIST is another way that the real answers to that question can rationally be developed.

Mr. VALENTINE. Before I ask another question of Mr. Line, let me suggest if any of you have any information that you would like to give us in response to that question, that we would be happy to receive it.

Mr. Oksala.

Mr. OKSALA. Yes. Thank you.

I particularly would like to support what Henry said, and I would mention too maybe a little more specific ways of saying what he said. One is that whenever money gets tight, and it gets tight for the public sector just like it gets tight for the private sector, somehow travel becomes an evil. Anyone who has ever been to a standards meeting knows this is not fun in the sense of going to Palm Springs, and yet very frequently our technical experts—and, again, this happens in both the public and private sector—find that they cannot attend a critical technical meeting simply because, quote, there is no travel. I think a better look at the components of expense would be really helpful.

The other observation I would make about dues is that Unisys is an \$8 billion company, so we are not a small organization by any means. Our dues to ANSI are approximately the same as that of all of the agencies of the entire Federal Government, which seems like a bit of an imbalance.

Thank you.

Mr. VALENTINE. Mr. Mazza.

Mr. MAZZA. Thank you, Mr. Chairman.

I certainly would agree with my colleagues that it is very important that the Government continue to fund the participation of its technical experts. I think we need to go a little beyond that in the sense we need Government support for educating private industry, that they must also get their experts into the process, because, again, where that happens as a country we are extremely successful. Where we fail in international standards is where we do not participate, and very often Government just does not have that expertise. We need to get out to industry and tell them that they have to participate. Getting out and communicating is a costly activity.

The third point I would like to make is, there is some sense in the community that Government should pay its fair share of supporting this general infrastructure that is necessary to make international standards work. That doesn't mean pay the whole bill but certainly pay more than the \$30,000 that it actually adds up to today, other than specific programs such as the national standards system network or an EPA grant.

Actually, Mr. Oksala's company pays about twice as much as all the Federal agency dues put together.

Mr. VALENTINE. Anybody else?

Well, there will be plenty of opportunities as we go through this process.

Mr. Line again, in what market sector do you see, for lack of a better word, a legitimate role for Government standards involvement? And how do you see this role? If you could be as specific as you can.

Mr. LINE. I guess in light of the comments I have just made about funding participation in the domestic and global committees, I am trying to determine in my mind if there is any sector where your assistance wouldn't be useful or required.

I think most likely telecommunications and the information industry, the global information superhighway that I alluded to earlier, would be one very conspicuous area where assistance from the Government in the ways we talked about earlier would be especially appreciated.<sup>2</sup> I don't know that I can add more to it than that.

<sup>2</sup>The following is added for clarification:

"By this I don't want to give the impression that the private sector needs special help from the government developing standards for products used in the information technology industry. Our experiences in these committees is that work is progressing quite nicely.

However, at the higher levels of telecommunications and information technology standardization, help from the government clearly is needed—and on an ongoing basis. For instance, the efforts that led to ETSI's withdrawal of their IPR Undertaking would likely not have been as successful without government support. Efforts to have the U.S.'s voice better heard in the CEN/CENELEC Information Technology committees need government support. It was recently reported in *Business Week* that European manufacturers are achieving market dominance in wire-

Mr. VALENTINE. Could you kind of give us a brief overview as to how our principal overseas trading competitors deal with this overall problem—that is, Japan and Germany.

Mr. LINE. Well, from the vantage point from our perspective inasmuch as we participate in—well, I guess it is well over a hundred various committees internationally, where these standards are developed, global standards—and I guess I should add lest I lose the thought that many of the problems we deal with as a company and as a nation are alleviated when we can add support to global standards to build global markets for global products.

I think the simplistic answer perhaps to your question is that our competitors globally attend those meetings, and it is critically important that the U.S. representatives attend those meetings because if we are not there the work will be done for us.

Mr. VALENTINE. Mr. Oksala, in your testimony you allude to problems that you have encountered working in standards consortia. Can you clarify this and give us some concrete examples of just what you mean, what the problems are, and here again we invite you to suggest solutions.

Mr. OKSALA. I think the chief difficulty—consortia tend to get formed because people get frustrated with the speed of the standards process. What they discover after they have been there a while is that the reason it takes a while is that it is a political—with a small p—process and it simply takes time for a bunch of disparate views to get coordinated.

I think they have shown us the way in some areas, particularly in more modern techniques of working such as e-mail and others taking advantage of technology.

I think the major thing—and I think while there is some frustration, on balance I think they have been beneficial. They have been able to do a lot of things particularly in well focused areas of technology.

I think the biggest down side is the confusion about which standards are legitimate and which ones weren't, and this is an area where I think a formal recognition of the formal process coupled with the methods for taking the technical work being done in the consortia into the formal process will give us a healthier environment. In the former case, that is clearly something that, as we have said earlier, could be done by Government. The latter I think is a matter of the standards organizations changing their mind set, recognizing that all standards don't have to be developed within their own technical purview, and I think that is happening at least in our industry now, and I don't think there is anything that Government needs to do to encourage that other than, as we said earlier, participate in those groups which it finds relevant, which I think is all of them given that Government buys products and therefore has an interest in the standards for virtually everything that is produced in this country.

Mr. VALENTINE. Can you think of specific industries or market sectors where inadequate U.S. Government participation has been harmful to U.S. competitiveness?

---

less communications because they have embraced a European standard. Why was this not a global standard? Again, support by the government would benefit the process.



Mr. OKSALA. I know there have been some because they have been part of meetings where I have heard them. They have not been in our industry, and so I'm afraid I don't recall specific examples, but I know generally when there have been discussions about it, it has been a question of, "Oh, well, the standards didn't come out the way we wanted it," and you say, "Well, gee, how many of our companies were?" "Well, we didn't actually send anybody," and you say, "Oh, okay, I understand what happened."

But Sergio would probably have a much better idea of some industries—specific industries. It has not been an issue within our industry, I should say, because we are very active.

Mr. VALENTINE. Dr. Collins, through your work in the Inter-agency Committee on Standards Policy have you been able to identify any Government agency or agencies that, in your judgment, do not, or in the judgment, the collective judgment of the group, do not have appropriate resources to support standards work and international involvement?

Ms. COLLINS. I guess the fairest answer to that question is that thus far in the ICSP we really have not addressed the issue of whether or not any agency has adequate support. I think it is one of our tasks to look at in the future. At the moment we have concentrated on developing a working group to look at standards issues facing the Government, to look where regulations may be a barrier to trade, where we need to think through the issue of what position our agency should take to be sure that any agency going to an international meeting has a coordinated position and if two or more agencies go they at least know what each other's position is.

We are also working on the impact of ISO-9000 on the Government and what Government agencies ought to be doing with this series of quality standards, and we are working on the issue of conformity assessment and what might make sense within the Government to think about in terms of conformity assessment.

I would like to point out that NIST has recently received additional funding in the area of standards and we are launching a new standards and trade support program in 1995 which I refer to in my testimony, but its goals again are to reduce differences between the U.S. standards on specific products and those of all of our trading programs, and we are thinking very seriously of establishing permanent representation in specific countries, particularly the big emerging markets, including countries such as Mexico and Argentina where we will have resident staff who will work to facilitate recognition of U.S. technology test methods and conformity assessments, all the products of our complicated standards process, using private sector input and to provide technical support and advice to commercial and economic staffs in U.S. embassies.

So this is one way we are working to try and get knowledge of U.S. standards out into the world. It is not the only answer though by any means to the complicated financial question.

Mr. VALENTINE. Have you identified any statutory impediments that would prevent or might be calculated to prevent any of the Government players from fully participating in the process?

Ms. COLLINS. I don't believe that there are any statutory impediments, although I think sometimes there is a perception that there



might be. I suspect that a bigger problem for all of us is not paying sufficient attention to what is important, to not realizing early on that a standard is going to have major impact on the U.S.

I think we were sometimes a bit asleep during the development of the ISO-9000 series, and I pleased to notice that in the development of the 207 environmental management series the U.S. is taking a very active role in participating in the committees, in chairing working groups and ensuring that meetings do come to the United States, and I think sensitizing everybody to the important issues facing us is as important as providing extra money.

Mr. VALENTINE. Are the problems which attend all of this complicated business such that they lend themselves to reversal? What I am trying to say is, I have had people tell me since we started looking into all of this several years ago that some of our overseas trading partners utilize foreign aid in connection with the standardization process, that when they make certain requirements to get the money, that you have to make certain purchases, and they create standards which in effect mean that they would have to purchase products that were made in that country that gave them the money in the first place.

Has that been—I'll ask this of all of you—has that been a real hindrance to American trade? Is that a real problem? And if it is, is it a problem that can be overcome?

Ms. COLLINS. I think I would like to defer that question to Rich Meier. I am not really aware of specific instances where it has been a particular barrier.

Mr. MEIER. I have heard much the same thing, Mr. Chairman, from people in the standards community. I think for the most part the suggestion has been that there is a greater promotion of standards or foreign standards systems internationally through aid type projects, which is not something that we have done. I have not, on the other hand, heard specific complaints of particular trade problems that that has created. I think it is more in terms of offering foreign standards developers greater access in selling their standards, in selling their systems abroad.

Mr. VALENTINE. Mr. Meier, is this OMB Circular Number A-119, I believe it is, adequate to give your office guidance on how to use voluntary standards and coordinate efforts with other Government agencies, and can you suggest any improvements?

Mr. MEIER. My agency, along with many agencies in the Government, extensively commented on the A-119 in its development, in its final implementation, so we were quite satisfied with the results. It goes mainly to the development and use of standards in the Government, which is something which my agency itself does not do. As I think I pointed out in my testimony, we are perhaps the beneficiary of that system, because to the extent that it is successful I think our competitive posture is improved. We think it clarifies the proper role.

The Federal Government gives a great deal of appropriate guidance to the work that NIST is responsible for, and we are encouraged that I—I think that NIST has taken a very active role in implementing the circular, and we are cooperating very well with them in that process.

Mr. VALENTINE. I have a few other questions, but I will recognize our distinguished member of the subcommittee from Wisconsin, Mr. Barca, at this time if he has questions.

Mr. BARCA. Thank you, Mr. Chairman, and I apologize I couldn't be here earlier. We also have—the full committee is having a hearing at this time on academic earmarking, and then another committee I am on is also having a hearing at the same time. So it is a busy day.

But I wanted to ask a question of Dr. Hausker of the EPA, and the question is, I am trying to get a better understanding overall of what our goals are in terms of trying to apparently harmonize our environmental laws throughout the world. Is the goal to try to ensure that all nations are adhering to a similar level of environmental enforcement and environmental protection? Is that what we are aiming to try to achieve? Is that what your office is working on?

Mr. HAUSKER. It is fair to say that I think the U.S. Government is trying to encourage an upward movement of environmental standards throughout the world, and I think Vice President Gore said that in his speech at the signing of the GATT last April. However, we are not seeking an absolute harmonization across the world. We don't believe that one size fits all, and in both the NAFTA agreement and the GATT agreement we pushed for language that specifically—that reserved the right for any nation to set a level of protection appropriate for that nation.

What we are trying to remove on the international scene are environmental standards that are disguised trade barriers, that discriminate in an unjustifiable or arbitrary way.

Mr. BARCA. What we hear—what I hear from manufacturers in my area is, looking at the environmental standards that we have in this country vis-a-vis their competitors in different parts around the globe—and there has been concern expressed about their ability to compete with the varied kinds of environmental regulations that they have to face compared to their competitors—I just wonder how aggressively in the EPA we are pursuing trying to ensure that we are meeting similar standards.

Mr. HAUSKER. It is very much on our minds as we participate in the international fora as well as looking at our own domestic regulations.

Mr. BARCA. Let me just ask one other question. As you have spent time in this area and analyzed it, can you suggest any improvements or cite any shortcomings in the national voluntary standard system in the area of the environment?

Mr. HAUSKER. I don't think there's major shortcomings. I think, as some of colleagues observed, there is always room for improvement, there is room for better coordination between different agencies. I think we all wish that we had more resources to put at this problem, we had bigger international budgets, but OMB isn't here, so I shouldn't say anything out of school.

But we are actively participating in a number of international forums as well as domestic forums to use voluntary standards wherever possible. Wherever they can provide the environmental protection we need, we will pursue those.

Mr. BARCA. And how is the communication line set up at EPA as you find out through your office in your determining what standards are set amongst our competitors in, let's say, Europe or in Asia—is there an active communication flow as we are looking at new environmental policies to present to industries in this country?

Mr. HAUSKER. Yes, within EPA we have something called the standards network that cuts across all offices because, as you can imagine, there is standards that affect the Air Office or the water office or the Superfund office, and so we have a central network of people who monitor standards development, who participate in the international fora and are in constant communication so we have a coordinated way of dealing with these issues.

Mr. BARCA. Okay. Thank you.

Thank you, Mr. Chairman.

Mr. VALENTINE. Yes.

Back to Dr. Hausker. Let me ask you if you could tell us if the agency has an office of standards policy and who is—if it does, who is in charge, and tell us how the agency, if you will, sets policy and priorities.

Mr. HAUSKER. We do not have a centralized office that manages participation in the international fora for voluntary standard development, but, as I mentioned, we have people in different offices across the agency in the areas—in the four major media offices—air water, Superfund, pesticides and toxics—who participate in these international fora as well as people from our enforcement office and other offices. We have a cross-cutting organization in EPA that keeps these people in touch with each other and that—and that coordinates our policy in this area.

Mr. VALENTINE. How do you allocate the funds based on that arrangement?

Mr. HAUSKER. I do not believe there is a central budget for this organization. I believe that offices allocate adequate staff and funding for the participation of those individuals in that office, but I could double check on that and get back to you on the record if you would like.

Mr. VALENTINE. If you would, we would appreciate it.

We recognize the fact that in your office situation perhaps you suffer from some of the advantages as Members of Congress. I don't mean to suggest that you are tarred with that same evil stick—please for give me for that, for even making the suggestion—but by the fact that you have "honorable" besides your name means that you are a political appointee and—quite an irony, isn't it?

Mr. HAUSKER. I hope the two are mutually exclusive.

Mr. VALENTINE. So you may refuse to answer on the grounds that your answer might tend to incriminate you.

Anyway—so you—you know, we're not here to try to put anybody on the spot. This is an area that is of real concern. EPA is a vast, vast empire, and we would really like to know in detail in writing if you could more about this. For example, how does your office coordinate the work of standards in the agency, if it does, and, as chief of the trade and environment committee at EPA, how do you use the—use or consider even the international standards in what you do?



So if you have any other comments to make here we would be happy to receive them, but if you could give us some more detailed information on these things it would be very helpful.

Mr. HAUSKER. Yes, I can comment just quickly. I think you have put your finger on one of the organizational challenges for EPA as well as, I'm sure, for other agencies and private business. We are set up largely—I touched on it when I talked a little bit about the Common Sense Initiative where we are trying to move toward a sector-based approach toward regulation. The basic lines of authority in EPA are media by media offices—as I said, the Air Office, Water, Office of Solid Waste and Emergency Response, or Superfund, and the Office of Prevention and Toxic Substances. Those are kind of the main lines of authority, and our statutes drive us to organize that way, and there's all sorts of cross-cutting issues that cut all across those media, trying to move toward ecosystem protection cutting across all media, trying to move toward a more sector-based approach toward regulation that cuts across all those media, trying to coordinate our participation in international voluntary standards organizations, trying to do the whole other range of GATT and NAFTA issues that involve all those.

So typically we have set up kind of a matrix form of management where we put together task forces and working groups with participation from all offices, the four media offices, general counsel enforcement, and I happen to be the vice chair on the environment and trade task force. That is how we are trying to handle these cross-cutting issues, and we are doing the best job we can. Sometimes—in essence, ultimately our statutes have to drive most of our activities and most of our form of organization. We do the best we can on the cross cutting.

Mr. VALENTINE. Mr. Mazza, can you be more specific on what role Government should play in the standards process? Are there, in your opinion, market sectors, or is there a market sector where—that would benefit from a more active Government role or examples of a reverse situation?

Mr. MAZZA. It is difficult for me to think of a specific market sector, but I can speak to the general question of the Government's role in the process. I have spoken before to the role of Government experts continuing that and actually increasing that and supporting that. I have spoken to the issue of Government supporting the infrastructure in a fair share mode, realizing that that is not an easy thing to determine.

I see Government's role in policy issues both as part of the ANSI governance process and in terms of issues such as trade and removing standards and conformity assessment to standards as technical barriers to trade.

I see particularly a Government role in recognizing that standards is probably one of the very best ways to implement policy. Clearly the Government has a constitutional policy role in this country, but it doesn't always have the technical expertise when it needs to be implemented in the form of technical regulations. I think both Government, industry, and the people benefit when Government makes policy but leaves the technical content to the standards world where that technical expertise exist. In the broad-

est sense, that is the involvement I see on the part of Government, sir.

Mr. VALENTINE. In the health care debate, do you feel that the voluntary standards process has been used to its optimum?

Mr. MAZZA. No, sir, actually it has not. I think—well, unfortunately the legislation has gone back and forth, has changed back and forth, but clearly I think legislation in terms of health care reform—and I think that is what you are referring to—could make much better use of the voluntary standards process, particularly in the area of developing standards that will reduce the administrative cost of health care, and I think that is one area we really ought to focus on much more than we have.

One area where standards have been used very successfully is in the area of medical device standards where there is tremendous involvement by the FDA in this area and the private sector, and that is one area where—it is a success story of Government using voluntary standards as part of the regulatory process.

Mr. VALENTINE. What about that same question with respect to the National Information Infrastructure, for example?

Mr. MAZZA. That is a relatively new activity, but I believe it will be a very successful activity. I need to give you two perspectives on that. The first is, the National Information Infrastructure is not something we are inventing, it is something we have here today. What we are doing is not so much inventing something new but trying to define what it will look like in the future, and the process of defining what it will look like in the future has been undertaken by many different groups in terms of defining this architecture. What we need to do is work together in the standards community with Government in taking these architectures and saying what are the critical interfaces that need to be standardized.

Within the ANSI information infrastructure standards panel we have taken up that challenge, and we are working very closely with NIST, with ARPA, with the FCC, to do exactly that. We are trying to take from these different architectures or descriptions of the information infrastructure what the critical interfaces are. We are going to catalogue existing standards against those critical interfaces, and we are going to do a gap analysis—in other words, say what is missing that we need and then start to allocate work. We hope that by building these standards and cataloging these standards we will facilitate the rapid deployment of the future information infrastructure.

Mr. VALENTINE. Well, we, as I stated, will perhaps have other questions to submit to you, and members of the committee.

I do want to say something that I should have mentioned earlier, that after we had planned this meeting—I'm sure that's the case—a meeting of the full committee was arranged, and of course the chairman of the full committee is the 800-pound gorilla. So that is one of the reasons that we don't have more folks here today. I will leave here and go to that meeting if there is any left of it. And, as I said, I should have made that explanation earlier.

This business will continue. This committee will continue its—what I hope is perceived as diligence in this area. You know, Members of Congress come and they go; the committee—I mean the staff—goes on forever, and that is as it should be because that is



where the real brains in the organization is. So we hope—I hope personally that this work will continue with enthusiasm and, as I said, believe that it will.

One word of caution and admonition. You know, things get done in the Congress because of suggestions that are made and information that comes from national organizations. Changes for good or ill usually result, however, from impetus from one's constituents, so you should always be aware, I believe, of the fact that messages that you want to get to Members of Congress, if you can find people in the congressional district of those Members of Congress, whether on this committee or elsewhere, that is very effective leverage, and when you deal with Members of Congress, whether they are country lawyers or doctors or whatever, you must recognize the fact that you speak about a field that to you is second nature but to most other people is very, very complicated.

Standards, to most of us, means that somebody says what a foot is and it is no longer the size of the President's shoe. Standards, to most of us, is the fact that if I buy a screw I damn sure expect the screwdriver I have to be able to get into that slot and to twist it into wood, that the rails are the same distance apart; if I buy a Swedish chain saw, a chain made in Japan would fit it. So—except when dealing with staff, who understand all these things inherently—in dealing with Members of Congress, be careful to explain what you are talking about.

Thanks again for all your effort, and those of you who participated in this process for the first time, I'm sorry that you didn't get more thrills.

The subcommittee is adjourned.

[Whereupon, at 11:13 a.m., the subcommittee was adjourned.]

## APPENDIX

---

Unisys Corporation  
Township Line & Union Meeting Roads  
PO Box 500  
Blue Bell PA 19424-0001

**UNISYS**

October 4, 1994

Lena Steele  
Subcommittee on Technology, Environment and Aviation  
B-374 Rayburn House Office Building  
Washington, DC 20515  
Fax (202)225-7815

Dear Ms. Steele:

Attached please find my answers to the additional questions posed in Mr. Valentine's letter of September 23. If I can be of any further assistance, please let me know.

Sincerely,



Stephen P. Oksala  
Director, Corporate Standards

**Can you elaborate further on the problems you have encountered in working in standards consortia that you alluded to in your testimony. Can you propose some solutions? Is there a role for government in implementing a solution?**

Over the last several years there have been numerous consortia formed in the information technology industry. While most have started out to support the standards process rather than developing standards, they have in many cases developed specifications which complement, supplement, enhance, explain, combine, or even replace existing formal standards. The problem with this is that vendors and users are (1) unsure as to which can be considered "legitimate" standards, (2) which of possibly competing standards should be followed, and (3) which of these groups to participate in. This latter point is of no small significance since the cost to participate can be considerable, not to mention the need to allocate scarce technical (human) resources.

There can be no prohibition of the formation of these groups; nor should there be, because many of them do useful work. What would help is (1) greater acceptance by formal standards organizations of the work done in these other groups; (2) greater acceptance by the consortia of the formal process with its mechanisms for assuring fairness, openness, and a guarantee of due process; and (c) an environment in which the various parties can play their roles without conflict. Government could do several things to support a transition to a healthier environment.

- Government could formally recognize the formal standards process in the United States by granting a federal charter or its equivalent to ANSI as the "official" standards coordinating entity in the United States. While this would be somewhat controversial (some standards developing organizations do not feel they need an "umbrella" organization), it would bring coherence to the system and make it easier to deal with the international standards scene.
- Government could clarify what it means by "international standards bodies" in documents such as OMB Circular A-119. This has been an issue for several years because some standards developers and consortia claim to be "international" on the basis that their membership includes organizations or individuals from around the world. While there are many possible ways of organizing the standards process at the international level, the use of national delegations seems to best meet the need of providing access to everyone while keeping the direct decision making processes at a manageable level. Government could, as part of this process and the one above, officially designate those organizations recognized as international standards bodies and the U.S. entities designated as our representatives. (E.g. Department of State for ITU, ANSI for ISO and IEC.)

- Government participants in both kinds of organizations could support or even initiate efforts to get the respective groups to recognize their respective roles. As one specific example, government participants in the Internet Engineering Task Force (IETF) could encourage the IETF to either submit their standards to an accredited U.S. standards developer or (preferably) get accredited by ANSI as a standards developer and work to get their standards accepted as National and International formal standards. (While not unique, the current situation of independent actors is best exemplified by the IETF - which is not a formal standards organization. Their standards are unquestionably accepted around the world; and their process is either good enough for accreditation or could be so with trivial changes. The apparent difficulty is an unwillingness to become part of a total process; government could help change this.) Government could also indicate a preference for products conforming to formal standards in procurement.

**Government has been criticized for not paying its fair share for participating in the standards process. In what manner should the government underwrite its fair share of the various costs of standards development? As a private sector representative, please define what the government's fair share should be and how it should be determined.**

There are many ways that government can provide financial support to the standards system - tax credits, education programs, hosting meetings, and other direct or complementary activities are covered in my previous submissions. I therefore take this question as addressing the direct question of dues to formal organizations.

At the current time ANSI (and I believe most other standards developing organizations that recognize organizational rather than individual members) allows each government agency to have membership at a minimal fee. (As I noted in my testimony, the total dues paid to ANSI by U.S. Federal Government agencies is about the same as Unisys dues.) While there are a variety of possible ways of computing a "fair" value, the use of revenue seems to be the most reasonable method of determining value of the process to the participant; so one could take the percentage of gross national product allocated to the federal government and use that percentage to determine dues payments.

Other than this mechanical computation, I can only offer a purely intuitive opinion that the federal government represents about one third of the process and should therefore pay about one third of the expense. On this basis the total dues to ANSI, as an example, would be around \$1.3 million.

Once the amount is determined there remains the question of whether this should be a single payment from a central source or a variety of payments by each individual agency. I have no strong feelings about this. I would observe that participation by various agencies is similar to the participation by various companies - there is no single point of view expressed, and agencies frequently

oppose each other on both technical and procedural issues. In this sense the current participation is not "the federal government" - it is DoD, NIST, DoE, and so forth. I do think it is useful to get these different perspectives, since the participants know the interests and missions of their own agencies and really cannot be expected to make technical judgments in the "best interests of the U.S." since they have no way of determining those interests. So on balance, I would suggest that a single payment might be made (much more efficient to process) with agencies retaining their independent memberships.



## RESPONSES OF HENRY LINE, AMP INC.

1. In your testimony you propose that a "forum be created for more effectively resolving the vexing financial issues that more and more must be addressed by both government and ANSI." Exactly what vexing financial issues are you referring to? Please be specific. What realistic solutions would you propose that do not call for more government funds as the answer.

The costs of the standards making process continue to increase -- costs that are borne by industry and government alike -- and which ultimately are reflected in higher product selling prices and/or taxes. For the most part, these costs are a result of the increased level of activity in standards development. The rate of implementation of new technology continues to increase, and in new areas, and the processes are global rather than just national. In addition to the more traditional bodies for developing standards, industry consortia, many of which develop standards, are becoming more numerous. To remain competitive, companies must participate in many of these organizations making the costs of their standards participation all the more apparent. In addition, it is possible for companies and government agencies to receive many of the benefits of the voluntary system without paying their fair share of the attendant costs adding to the burden of those who do pay. Much of this is "business as usual" and the private sector is hard at work addressing new approaches for added efficiencies and cost containment without adversely impacting the benefits of the system. Putting in place electronic tools to speed up the development of standards is just one example.

There are a number of ways the government can more beneficially participate in the process. While many more could be developed by the proposed joint ANSI/NIST "forum," the list includes the items that follow. It should be noted that for many, modest increases in government funding are required, this likely is the "nature of the beast." However, in all examples the strengths of the voluntary system are preserved and extended.

- a) The government should accelerate its participation in national and international standards development bodies. These experts are already in place, in various government agencies. Their participation in these organizations ultimately should, through their contributions, decrease the overall time and costs of standards development.
- b) The government should consider assuming the responsibility for ANSI's dues in international bodies such as ISO and the IEC. This would offer relief to ANSI's dues paying constituency, and increase the government's fair share of the costs of providing the benefits enjoyed by government agencies.
- c) The government should strongly support in the global community the U.S. industry position of supplier's declaration of conformance as a valid and appropriate means of certifying performance to the requirements of non-health or safety related standards. Many third party conformance schemes, in place or proposed, add

making available the opportunity for "one stop" assessments. This body should have authority for establishing requirements for and implementing global mutual recognition of conformity assessment programs.

- c) Although work is currently under way to equip future revisions of ISO 9000 with total quality management tools, such as statistical process control, it is important that this work be completed in a timely fashion and not lose focus.

**3. It has been suggested that changes to the antitrust laws could be helpful to the standards system; can you elaborate with specifics?**

It is generally agreed by those who understand the role of standards that industry standards are tools that foster competitive behavior -- both during the development of the standard and in the marketplace after the requirements have been agreed upon. During the process of developing standards in the U.S., standards developers typically (a) try to achieve a consensus of those materially interested and affected (b) follow procedures that provide for some level of public review and due process and (c) attempt to avoid conflict with and duplication of other existing or incipient standards. This process can be inherently time-consuming.

In today's world, the accelerating pace of technological innovation requires more rapid development of standards in order for many industries to remain competitive in the ever-more-global marketplace. Similarly, increased health and safety awareness and concerns drives the need for new related standards, which, to be effective, must be produced more quickly. These conditions are well recognized by standards developers and they are hard at work to find acceptable ways to be more efficient and to expedite the production of standards. However, because of certain consequences associated with even the perception of possible breaches of antitrust law, many of these standards developers are reluctant to introduce streamlined procedures.

I would suggest that the antitrust laws be modified to provide that only the "rule of reason" should be applied to any antitrust challenge to standardization activities. As I understand it, under the "rule of reason" approach, the court analyzes the likely competitive effect of the questioned conduct. The concern that standardization activities could be reviewed under the "per se" unreasonable practices analysis would appear to be a hindrance to the effective and efficient development of U.S. standards. That analysis generally is applied to conduct such as price-fixing, certain group boycotts, the horizontal division of markets, etc., and the only issue is whether the conduct occurred. In other words, those activities are deemed to be illegal even if they have pro-competitive effects. This potentially disadvantages U.S. competitiveness in a standards environment that constantly is growing ever more global.

If the "rule of reason" analysis were applied in all standardization cases, then the development process could be streamlined. While still providing for due process, the developers would only need to provide such process as is due as opposed to the more

elaborate processes they currently follow in order to ensure against potential unwitting antitrust violations. These elaborate processes also help protect developers from liability from the unauthorized acts of agents or volunteers, most of whom are participating in the process so that the resulting standard is a consensus document. Accordingly, I also suggest that standards developers not be held liable for the acts of such persons whose activities are not within the developer's knowledge or under its control.

As an example, in order to avoid conflict and duplication among standards and avoid wasted efforts, standards developers need to be able to allocate among themselves which developer should develop which standards. If the "per se" rule is applied, to some extent this conduct may be considered violative of the antitrust laws. If the "rule of reason" were applied, the conduct would likely be condoned.

I believe, if these suggestions were incorporated into current antitrust law, vis-à-vis standards development, and, further, addressed in any antitrust provisions of the Cooperative Research Act, U.S. competitiveness in the global standards arena would be enhanced as an immediate result.

**AMERICAN  
FOREST &  
PAPER  
ASSOCIATION**

1111 19TH STREET NW, SUITE 800, WASHINGTON, DC 20036  
PHONE (202) 463-2700 DEPARTMENT FAX (202) 463-2424

October 3, 1994

GOVERNMENT AFFAIRS

The Honorable Tim Valentine  
Chairman  
Subcommittee on Technology,  
Environment and Aviation  
Committee on Science, Space and  
Technology  
U.S. House of Representatives  
Washington, D.C. 20515

Dear Mr. Chairman:

On behalf of the American Forest & Paper Association (AF&PA), we would like to request that the Subcommittee accept the attached statement to be included in the record for the hearing held September 22, 1994, on the subject of "International Standards and U.S. Exports: The Key to Competitiveness or Barriers to Trade?"

We were very pleased to learn of the Subcommittee's interest in this important trade issue, and we applaud the Chairman's decision to hold this hearing and provide a forum for the discussion of this timely subject.

If you or the staff have any questions regarding AF&PA's statement, please do not hesitate to contact me. My telephone number is (202) 463-2476.

Sincerely,



Sarah M. Hildebrand  
Director  
Legislative Affairs

Attachment

**AMERICAN  
FOREST &  
PAPER  
ASSOCIATION**

1111 19TH STREET NW, SUITE 800, WASHINGTON, DC 20036  
PHONE (202) 463-2700 DEPARTMENT FAX (202) 463-2787

INTERNATIONAL

**STATEMENT OF  
THE AMERICAN FOREST & PAPER ASSOCIATION (AF&PA)**

**SUBCOMMITTEE ON TECHNOLOGY, ENVIRONMENT AND AVIATION  
COMMITTEE ON SCIENCE, SPACE AND TECHNOLOGY**

**"International Standards and U.S. Exports:  
The Key to Competitiveness or Barriers to Trade?"**

The American Forest & Paper Association (AF&PA) applauds the Subcommittee's decision to address the subject of whether international standards improve U.S. competitiveness or constitute barriers to trade. This is a very timely and important subject in view of two recent developments. The first is the conclusion of the GATT Uruguay Round Agreement, with its provisions emphasizing the role of international standards in the global trading system and linking the issues of trade and the environment. The second is the decision by the International Standards Organization (ISO) to expand its efforts to include the development of international environmental management systems standards.

AF&PA members include approximately 550 member companies and related trade associations (with members in the thousands). They grow, harvest, and process wood and wood fiber, manufacture pulp, paper and paperboard products from both virgin and recovered fiber, and produce solid wood products.

Through its members, AF&PA represents a vital national industry. The U.S. forest, wood, and paper products industry

- accounts for over 7 percent of total U.S. manufacturing output,
- employs about 1.4 million people, and ranks among the top 10 manufacturing employers in 46 states, with annual wages paid of about \$46 billion, and
- contributes substantially to the U.S. balance of payments, exporting \$17 billion of products in 1993.

The U.S. forest products industry is ranked among the most competitive in the world and its export markets represent the greatest potential for its continued growth. As a result, AF&PA is acutely



interested in the impact current and future international standards have on global trade and the ability of our members to compete internationally.

### **The Impact of Standards on the Forest Products Industry**

The U.S. forest products industry is affected by a wide range of voluntary standards and specifications governing its products.\* With respect to paper products, voluntary product standards and technical specifications govern such things as the size, weight, opacity and strength of various paper products. For wood products, voluntary standards and specifications include such things as wood strength, sizes and classification. Many of these standards and specifications are international and also affect our international competitors. The existence of many of these standards has made it easier for U.S. companies to compete in international markets, has reduced trade barriers and has facilitated global competition.

However, unlike many of our international competitors, the U.S. forest products industry is also subjected to extensive domestic government regulation. Because the regulatory frameworks and the associated enforcement systems of most foreign countries are not as advanced as they are in the United States, U.S. companies frequently must meet additional standards that do not apply to their international competitors.

One of the most dramatic examples of the difference between the regulatory and enforcement mechanisms of the U.S. and the rest of the world is in the environmental arena. The result of this disparity is that, while the U.S. government achieves its environmental objectives by imposing and rigorously enforcing some of the most stringent environmental regulations in the world, other countries may look to international standards bodies, like the ISO, and voluntary labelling and certification programs to achieve their environmental objectives.

The existence of these possibly inconsistent and/or duplicative approaches to addressing environmental issues is having a profound impact on the international trading system and on our industry's ability to compete effectively in the global marketplace. For example, the effects of environmental compliance costs on international competitiveness were explored in a recently-released Office of Technology Assessment report, *Industry, Technology and the Environment*. This report reveals that the U.S. pulp and paper industry is one of the four U.S. industrial sectors most affected by U.S. environmental regulations (the other sectors are chemicals, petroleum, and primary metals). Together, these four industries account for over 70% of the \$25 billion spent by U.S. manufacturers each year to comply with environmental regulations. The report also notes that U.S. environmental compliance costs, whether measured as a percent of sales or as a portion of capital investment, hit U.S. manufacturers harder than competitors in either Europe or Japan. The disparity with suppliers from the newly industrialized countries (NICs) is even greater.

---

\* Throughout this statement, AF&PA will use the term standards in its broadest sense, and not necessarily to refer to officially accepted or adopted specifications or requirements. Its use of the term also encompasses laws and regulations creating standards.

**International Standards, Trade and the Environment,  
and the International Trading System**

The emphasis placed on product standards in the Uruguay Round GATT Agreement recognizes the important role product, process, and management standards can play in the international trading arena. At the same time, it also recognizes that standards can both facilitate trade and interfere with the operation of the global marketplace. In the agreement on technical barriers to trade, the Agreement encourages countries to join and participate actively in ISO's work on the basis that a maximum use of international standards will prevent unnecessary obstacles to the free flow of goods. The Agreement also provides for redress against use of standards as disguised trade barriers.

The potential impact of voluntary standards on international trade is captured in the 1994 National Trade Estimates (NTE) Report. The NTE Report, which identifies the trade barriers foreign countries erect against U.S. exports, addresses the effect ISO 9000 Quality Management Standards have had on U.S. industry, saying:

"While not a deliberate trade barrier, the exponential increase in the number of European firms certified under ISO 9000 and the increasing demand that their suppliers also be ISO 9000 certified, is causing concern among U.S. exporters. This is particularly true among those exporters for which such certification is financially prohibitive. While EU legislation does not make ISO 9000 certification mandatory, the quality management standard is becoming a de facto commercial requirement for doing business in the European Union."

The financial implications of obtaining ISO 9000 certification can be substantial. For large facilities, the cost can be hundreds of thousands of dollars. Complying with ISO environmental management systems standards could be equally costly (for many companies, it is not a question of being in conformance with the international standard, but the cost of being certified)

The Uruguay Round Agreement also specifically recognizes that standards in the environmental area, in particular, can give rise to trade barriers, or "green protectionism." It creates within the new World Trade Organization (WTO) a work program dedicated to the interplay between trade and the environment. Among other things, that work program, which will be managed by a Committee on Trade and the Environment (CTE), includes as one of its objectives a review of the relationship between the provisions of the international trading system and "requirements for international purposes relating to products, including standards and technical regulations, packaging, labelling and recycling."

AF&PA believes that the issues surrounding the role of international standards in the international trading system are clearly defined when standards and trade considerations intersect (some might say collide) in government-sponsored or endorsed environmental labelling programs. Although environmental or "eco" labelling programs may not constitute standards in the traditional sense, AF&PA believes the issues they pose for the international trading system may be readily applied in other areas.

By exploring some of the issues that have arisen with respect to certain national eco-label schemes, and especially the scheme being pursued in Europe (see attached letter from U.S. Ambassador to the

European Communities Stuart Eizenstat to Sir Leon Brittan), many of the questions about how standards can affect trade and competitiveness can be answered.

The emphasis on international standards found in the GATT Uruguay Round requires recognition that standards -- and therefore trade protectionism -- may take many forms.

Many laws, regulations and business practices, though not characterized as standards per se, may function and operate as standards in domestic and international marketplaces. Thus, the international recognition of the trade impacts of international standards requires that, as new national and international standards are developed, they must be compared against existing national and international laws and regulations. Equally important, as new laws are written, they should be considered in the context of the legal, regulatory and voluntary standards and business practices and philosophies that exist in other countries.

One of the greatest determinants of whether or not a standard is truly voluntary is the extent to which it is government-sponsored or endorsed.

Unlike in the United States, where non-governmental standards are truly voluntary and adherence is often recognized as a commercial choice, the "voluntary" standards-writing and enforcement mechanisms of many other countries are government-sponsored and endorsed. In these countries, standards -- regardless of whether they are voluntary or mandatory -- may perform the same functions as many mandatory U.S. laws and regulations. Differences most likely arise in how these requirements are enforced. While in the United States they are enforced and compliance is assured through the legal system, in other countries and regions (such as Europe), standards are enforced through the marketplace and compliance is ensured through certification procedures. Thus, while many countries may claim that their standards are voluntary, they are, by design and in practice, anything but.

This difference in how governments perceive standards, also has a profound impact on industry. In the United States and elsewhere, businesses frequently accept compliance with voluntary international standards as a commercial reality. However, in the United States, businesses must frequently also comply with duplicative and potentially conflicting laws and regulations, which are legal necessities. For them, compliance with and certification of conformance with a voluntary international standard represents an additional administrative and financial burden.

The difference in how standards are perceived also explains the tension that frequently arises between U.S. and other countries in discussions about standards. In the U.S., where the voluntary standards system is non-governmental, business and the government alike resist greater government involvement in the system, including compliance and certification. At the same time, foreign governments and their businesses find the voluntary system confusing and complicated. As in their own countries, they want to be able to look to only one place in the U.S. to receive information and obtain information and that one place to which they look is frequently the U.S. government.

Another factor affecting whether a standard is truly voluntary is whether and to what extent it is relied upon as a government procurement requirement. Because governments frequently represent businesses' largest customers, the requirements they place on their suppliers can become de facto industry standards.

The nature of a standard will significantly influence whether it constitutes a trade barrier.

International standards must be objective. Concerns about protectionism will arise whenever a standard is arbitrary, when it relies on subjective or qualitative determinations, or when it is unduly influenced by local, parochial interests. Objective, measurable technical specifications that relate to a product's performance or its ability to satisfy a stated, clearly defined goal and/or which have a sound basis in science are less likely to raise concerns with protectionism.

In the eco-labelling arena, schemes that seek to impose a government authority's view of what constitutes an "environmentally preferable" or "environmentally friendly" product or process likely will be challenged in the trade arena. Decisions about what constitutes "environmentally preferable" or "friendly" can vary widely and in many cases will be affected by local or regional conditions and needs. Further, the criteria that are selected for identifying those products that meet the eco-label standards, can themselves determine whether or not a product or process will qualify. (For similar reasons, management standards may by their nature be problematic.)

In part as a reflection of this reality, most Americans who are involved in ISO's effort at developing standards for eco-labelling believe the purpose of an eco-label should be limited to providing information that will permit consumers to make informed decisions about the environmental impact of the products they purchase. At the same time, their European colleagues see eco-labelling as a vehicle for changing the environmental profile of companies, products and the marketplace as a whole -- and impacting international competitiveness.

Transparency in the Process of Developing Standards is Critical.

All parties who may be affected by a proposed standard must be allowed and encouraged to participate in the process by which the standard is developed. If their views are not represented, there is greater likelihood that the standards will reflect the biases and vested interests of those who are involved.

In the U.S., the process by which standards are developed is thrown open to participation by all interested parties, including non-nationals and representatives of foreign standards organizations. Further, OMB Circular 119 specifically encourages government agencies to defer to the voluntary process and to use voluntary standards whenever possible. This is not the case in Japan and Europe, where standards-writing is most often an official government function. Neither Europe nor Japan invite foreign involvement in their standards-writing processes and, in the case of Europe, outside participation is specifically denied.

It is equally critical that government-sponsored schemes for identifying and labelling "environmentally preferable" products are kept open to participation by outside interests. Transparency is needed with respect to the process by which product groups are identified and defined. It is also vital when identifying and quantifying any criteria that will be used to determine whether a product qualifies for the label. In the absence of such openness, criteria that would preclude from the outset products that are made using different processes or production methods.

The nature of a standard also will affect whether international harmonization is possible or appropriate.

The international harmonization of standards can give rise to significant problems if the goal of the standard is not universally recognized or accepted, or if the standard is not based on sound science. Further, harmonization may limit technological and other advances because alternative solutions become non-viable commercially.

The scope of a standard also may affect whether or not it should be harmonized internationally. To the extent the standard deals with a process or production method (PPM) that does not have an impact on the final product's performance, harmonization may result in the inappropriate extraterritorial application of national or regional approaches.

### Conclusion

The GATT Uruguay Round Agreement's emphasis on international standards and its linkage of trade and environment issues, coupled with the expansion of international standards organizations into new areas (including specifically ISO's adoption of Quality Management Standards and its work on Environmental Management Systems Standards), requires that U.S. government bodies, as well as American business, pay close attention to the potential for voluntary standards -- and laws and regulations that function as standards -- to impact international competitiveness and give rise to international barriers to trade.



UNITED STATES REPRESENTATIVE  
TO THE  
EUROPEAN COMMUNITIES

May 31, 1994

Dear Sir Leon:

I am writing to draw your attention to United States concerns over criteria for tissue paper now under Commission review as part of the EU's ecolabelling scheme. I understand that you may be called on to approve these criteria in the near future. As the United States exports more than \$3 billion of pulp and paper products to the European Union member states, our exports may be substantially affected by these criteria. Moreover, we have some concerns which we would like to explore further with regard to the overall transparency of the program..

We understand that the ecolabelling program is voluntary. We are concerned, however, that criteria developed for ecolabelling purposes could disadvantage producers from countries where equivalent, and/or different standards are applied. In the case of tissue paper, the proposed ecolabel criteria for tissue paper products may disadvantage U.S. suppliers by establishing a preference for products and inputs made through processes used primarily in Europe. These consequences could be worsened if ecolabelling were to become an official requirement in the future, for example in EU and member-state procurement. As we understand that ecolabelling criteria will also be developed for other paper products such as copy paper, trade effects are potentially substantial and could raise concerns under the GATT agreement on technical barriers to trade.

There is as yet no international consensus on appropriate methodologies for lifecycle analysis of the environmental effects of a product over its entire existence. Hence, we urge that EU and competent body officials consider alternative methods of achieving the desired environmental outcome in any environmental labelling scheme. Where possible, acceptance of such alternative methods can achieve the same environmental objectives while avoiding unnecessary restrictions to trade.

- 2 -

We would also like to see greater transparency in the procedures used in the development of criteria for eco-labels and acceptance of equivalent foreign standards and test data in order to avoid increased costs of compliance and trade disruption. We look forward to exploring this topic further in the upcoming meeting for interested parties organized by the Consultation Forum on the Ecolabel. With respect to the tissue paper criteria, we also need to develop procedures whereby U.S. and other third-country exporters of market pulp and other material inputs would be able to obtain certification that their exports can be used in production of ecolabelled products.

With best regards.

Sincerely,

  
Stuart E. Eizenstat  
Ambassador

Sir Leon Brittan  
Commissioner  
European Commission  
Rue de la Loi 200.  
1049 Brussels

*Best wishes to you and to your wife!*

**NIST**

**UNITED STATES DEPARTMENT OF COMMERCE**  
**National Institute of Standards and Technology**  
Gaithersburg, Maryland 20899  
OFFICE OF THE DIRECTOR

October 19, 1994

Ms. Virginia Lindsey  
Subcommittee on Technology,  
Environment, and Aviation  
Committee on Science, Space,  
and Technology  
House of Representatives  
B-374 Rayburn House Office Building  
Washington, DC 20515

Dear Ms. Lindsey:

Attached is the corrected transcript of testimony by NIST Office of Standards Service Acting Director Belinda Collins at the hearing before the House Science, Space, and Technology Subcommittee on Technology, Environment, and Aviation on September 22, 1994, on International Standards and U.S. Exports: Keys to Competitiveness or Barriers to Trade and answers to questions later submitted by Chairman Valentine.

If you have any questions, please contact me at (301) 975-3080.

Sincerely,

Verna B. Hines  
Senior Legislative Analyst  
Congressional and Legislative  
Affairs

Questions for Dr. Belinda Collins

Hearing on International Standards and U.S. Exports:

The Key to Competitiveness or Barriers to Trade?

- 1). Can you elaborate further on the work you are accomplishing through the Interagency Committee on Standards Policy (ICSP) and are you aware of any regulatory impediments that prevent government agencies from fully participating in the voluntary standards process?
- 2). Is OMB Circular A-119 sufficient in guiding your coordinating efforts at NIST? Should it be revised and improved? How is it enforceable now? Should Congress provide support for the Circular and, if so, what kind of support, and how should it be done?
- 3). Are there specific market sectors or industries where inadequate U.S. participation in international standardization has harmed U.S. competitiveness? If so, how can it be corrected? What is the appropriate role for NIST?

Q: Can you elaborate further on the work you are accomplishing through the Interagency Committee on Standards Policy (ICSP) and are you aware of any regulatory impediments that prevent government agencies from fully participating in the voluntary standards process?

Since the recent rechartering of the ICSP, we have moved to meet more frequently and have established working groups to address key policy issues facing executive agencies in their standards-related activities. In particular, ICSP participants will address any regulatory impediments to increased participation in the voluntary standards process. I also created an ICSP working group to examine standards-related issues facing government agencies in the regulatory, procurement and trade areas. This group will document and report on problems or constraints relating to increased reliance on voluntary and international standards, and will propose solutions for ICSP consideration. Issues include legal or other barriers, special procurement problems, interactions with private sector interests, and sector-specific concerns.

Another ICSP working group is addressing federal agency use of the ISO 9000 quality system standard series and related registration and accreditation activities. Its goal is to develop recommendations for ICSP consideration regarding the creation of a system, acceptable to both government and industry, which assists federal agencies in their regulatory and procurement efforts, while at the same time it facilitates U.S. trade by increasing national and international confidence in the U.S. quality system registration system.

The ICSP will deliberate the findings provided by these working groups and provide recommendations and policy guidelines to agency heads and OMB.



Q: Is OMB Circular A-119 sufficient in guiding your coordinating efforts at NIST? Should it be revised and improved? How is it enforceable now? Should Congress provide support for the Circular and, if so, what kind of support, and how should it be done?

The October 1993 revision of OMB Circular A-199 includes several important new policy provisions and management controls. Policy changes include clarification of policy regarding voluntary, consensus-based, and international standards in regulation and procurement; incorporating metrication objectives; and promoting standards that are environmentally sound and energy efficient. As in the original (1982) Circular, responsibility for policy coordination and implementation of the Circular is assigned to the Secretary of Commerce. NIST continues to carry out the coordination responsibilities on behalf of the Secretary through the Interagency Committee on Standards Policy (ICSP).

New management controls include improved coordination between the Secretary of Commerce and agency heads, the creation of agency Standards Executives, establishment of procedures to encourage agency participation in voluntary standards bodies, and improved reporting procedures between the Secretary of Commerce and OMB.

The newly-created Standards Executive is expected to encourage agencies to give a higher profile to standards-related issues within their organizational structure. Under the Circular, each Standards Executive provides a focal point for monitoring and coordinating standards activities throughout their Department or agency and, as such, should have direct access to the highest decision-making authority therein. We have had good response from agencies in designating responsible Standards Executives under the provisions of the new Circular.

Both NIST and OMB believe that Standards Executives fulfill a vital role in meeting national objectives on standards-related matters. This has been made clear to agency heads. Since Departments and agencies must provide information annually on their implementation of the Circular to the Secretary of Commerce, who in turn must submit a report to OMB, excellent enforcement mechanisms are in place. As part of this report, the Secretary must evaluate the effectiveness of the policy promulgated in the Circular and recommend any needed changes.

At this time, given the new management controls in place, there is no apparent need for further revision of or improvement to the Circular. In its role as chair of the ICSP and through direct contacts with other federal agencies, NIST is prepared to monitor the effectiveness of the Circular. However, NIST is not chartered with other authority or responsibility.

Q: Are there specific market sectors or industries where inadequate U.S. participation in international standardization has harmed U.S. competitiveness? If so, how can it be corrected? What is the appropriate role of NIST?

NIST plans to use some of its newly appropriated funds to support the attendance of key NIST technical experts at international meetings. In addition, NIST is working with ANSI and the private sector to develop means of determining those international standards activities that need U.S. support and technical participation by either the private or public sector. For example, our activities in support of World Standards Day this year are focussed on increasing corporate executives' awareness of the importance of standards for world trade.

USTR and ITA are generally responsible for determining what trade sectors need attention. The area of information technology, which is viewed as a key industry in U.S. competitiveness, has received greater attention recently. Through the ICSP, we will work with our colleagues in other Federal agencies to identify all important standards activities that are not now being adequately covered.

PO Box 3608  
 Harrisburg, PA 17105-3608  
 Phone 717-564-0100  
 TWX 510-657-4110

**AMP**

AMP Incorporated

October 27, 1994

Ms. Karen Pearce  
 U.S. House of Representatives  
 Committee on Science, Space, and Technology  
 Suite 2320, Rayburn House Office Building  
 Washington, DC 20515-6301

Dear Ms. Pearce:

In response to Congressman Walker's request for additional information to be included with the permanent record of the September 22, 1994 Subcommittee Hearing on International Standards and U.S. Competitiveness, I am pleased to submit the following.

**Question:** "During the early 1980's, the Committee on Science, Space and Technology brought about enactment of The National Cooperative Research Act which lessened antitrust barriers to doing research on a cooperative basis among competitors. Recently, this concept was extended in a limited way to joint manufacturing. In light of AMP's testimony, should there be an amendment to the National Cooperative Research Act which would lower antitrust barriers to standards setting both domestically and worldwide?"

**Response:** Under the National Cooperative Research and Production Act of 1993 (the "Act"), joint research and development ventures are evaluated under a "rule of reason" analysis and are not deemed illegal "per se." I believe that standards developers would be able to streamline their procedures and better support U.S. industries competing in global markets if the Act protected their conduct from "per se" review by the courts. It is my understanding, however, that the Act presently does not apply to most standardization activities.

The Act's definition of the term "joint venture" in Section 2.(a)(6) would include most aspects of the standards development process. However, these same standards activities would also be considered exclusions to the definition of "joint venture" set forth in Section 2.(b) (particularly subsections (2)(A), (3)(A), (4) and (6). For example, under subsection (4), "entering into any agreement or engaging in any other conduct allocating a market with a competitor" is excluded from the definition of those "joint ventures" to which the Act applies. Yet, as I noted in my earlier testimony, there are times when standards developers need to be able to allocate among themselves which developer should develop which standard in order to be more efficient and avoid conflict and duplication among standards. This type of conduct explicitly is not protected by the Act. Accordingly, if the Act

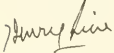
were to be amended to protect standardization activities from "per se" antitrust analysis, some of the exclusions to the definition of "joint venture" must be identified as inapplicable to these activities.

I believe that the fact that standards developers, (a) try to obtain consensus of materially interested and affected groups, (b) follow procedures that provide for some level of public review and due process and, (c) attempt to avoid conflict and duplication provides sufficient safeguards to warrant the use of the "rule of reason" in evaluating their conduct as opposed to the threat of "per se" liability. As an additional safeguard, the Act could provide that its protections would only apply to those standards developers accredited by the American National Standards Institute ("ANSI") or equivalent. Before accrediting a standards developer, ANSI reviews the developer's procedures to ascertain that they provide for consensus, due process, etc. ANSI, also, is in the process of establishing an audit process by which it will undertake to confirm that the developer is properly following its procedures. In keeping with this thinking, the Act would appear to not protect company competitors from coming together to agree on a consensus standard as would be developed under ANSI procedures governing standards development. To apply per se liability to such corporations would unnecessarily inhibit these corporations in their efforts to compete in global markets.

Finally, if the Act were to be amended, I would suggest that the potential liability of ANSI-accredited or equivalent standards developers, and those corporations that engage in standardization activities, be limited to actual as opposed to treble damages and that they not be required to file a notification with the Department of Justice and the Federal Trade Commission pursuant to Section 4 of the Act as a precondition to that limitation. Some standards developers develop thousands of standards each year. Any efficiencies they obtain as a result of any limitation on their potential antitrust exposure would be offset by the need to prepare and file numerous official notifications.

It must be understood that standards are vehicles to hasten the implementation of new technology in the marketplace. Speeding up the processes whereby U.S. standards are developed would quicken the rate at which U.S. standards - and U.S. technology - can be offered to the global community and thereby directly enhance U.S. global competitiveness.

Sincerely yours,  
AMP Incorporated



Henry Line  
Director  
Global Product Standards

HL:lh



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

NOV 7 1994

OFFICE OF CONGRESSIONAL  
AND LEGISLATIVE AFFAIRS

Hon. Tim Valentine  
Chairman  
Subcommittee on Technology, Environment,  
& Aviation  
Committee on Science, Space and Technology  
U.S. House of Representatives  
Washington, D.C. 20515

Dear Mr. Chairman,

This is in response to your September 23, 1994 letter concerning three questions you posed as follow-up to your September 22 hearing on international standards and U.S. exports.

Enclosed please find the responses to your three questions. If you have any questions or require further information, your staff is welcome to contact Mark Stevens (260-5422) of this office. Thank you.

Sincerely yours,

A handwritten signature in cursive script that reads "Christopher P. Hoff".

Christopher P. Hoff  
Deputy Director  
Legislative Analysis Division



Responses of The Honorable Karl Hausker, Deputy Assistant Administrator, Office of Policy, Planning and Evaluation, U.S. Environmental Protection Agency

Follow-up Questions - Valentine Hearing, 9/22

1. Since the EPA does not have an Office of Standards Policy, can you please elaborate further on how your agency sets standards policy and priorities? How do you allocate funds for international standards activities? How do you coordinate your agency's efforts?

EPA participates in national and international standards activities that relate to the Agency's mission. The Agency is organized according to regulatory mandates. For example, the Clean Air Act is enforced and implemented by the Office of Air, while the Office of Solid Waste is responsible for Superfund and provisions under the Resource Conservation and Recovery Act. Funding mechanisms and many policies and priorities are likewise handled on an Office-by-Office basis. Standards activities are supported and governed for the most part according to the needs and priorities of each Office. The Office of Research and Development, for example, supports the time and travel requirements of more than one hundred ORD employees to participate in national and international technology-related standards development.

The media based approach to standards involvement means that most "coordination" is really a function confined to an individual Office. However, in 1993 the Administrator supported the development of a new, informal EPA Standards Network to assure cross-Agency coordination of specific international standards. Emerging issues in trade and environment impact Offices throughout EPA. The Network develops and coordinates draft EPA positions on international standards (such as those in the International Organization for Standardization) and coordinates EPA participation in ISO.

The Agency also sits on the Interagency Committee for Standards Policy (ICSP) chaired by the National Institute for Standards and Technology (NIST). The ICSP is the primary U.S. Government body for coordinating the national and international standards activities of Federal agencies.

2. Can you describe in more detail how you use international standards in your role as Chief of the Trade and Environment Committee at EPA?

EPA's Trade and Environment Task Force facilitates Agency involvement in a wide range of international activities and coordinates policy internally. Last year we became members of two key interagency groups relating to trade matters: the Trade Policy Review Group and the Trade Policy Steering Committee. Trade and environmental issues raised in these groups often refer to international standards or areas where international standards could be developed. Task Force members from around the Agency evaluate and provide response on international standards used in

specific trade situations. The Task Force works in conjunction with the EPA Standards Network in developing EPA positions on many standards related issues such as eco-labeling and eco-auditing.

3. As a national regulatory agency, does your agency charter present any limitations to prevent EPA from participating in international standards activities?

No. As I stated above, the Agency regulatory mission is enhanced by our participation in international standards activities. Within ISO alone, the Agency enjoys full participation on Technical Committees for Air Quality, for Drinking Water, for Statistical Measurements, for Quality Systems and for Environmental Management Systems. In so far as normal considerations of time and travel permit, EPA participates freely in both the national and international standards communities.

American National  
Standards Institute

655 15th ST., N.W., SUITE 300, WASHINGTON, D.C. 20005-5754

TEL. 202 638 4090  
FAX. 202 628 1825

## MR. MAZZA'S ANSWERS TO TESTIMONY QUESTIONS

1. In what manner should the government underwrite its fair share of the various costs of standards development? What is the government's fair share and how should it be determined?

Mr. Chairman, I can respond to this question only from the perspective of ANSI; it is up to each standards developer to deal with the issue in its own way. If you wish, I would be happy to reach out to the standards developing organizations to gather their responses to this question, but this cannot be done quickly. The following observations are made from ANST's perspective, and are not necessarily the views of any individual standards developer.

The U.S. Government is receiving a wide variety of benefits from its participation in the voluntary standards system and if it chose to become more involved in the system there are many additional benefits it could derive. International voluntary standards help level the business playing field world-wide and make it easier for the export of U.S. manufactured goods if U.S. interests have participated fully in their development. Voluntary consensus standards are a preferred way to strengthen the effectiveness and enforceability of health and safety regulations; the standards process provides a means for industry to participate in the development of the standards underlying a regulatory framework that is easy to live with and tailored to the needs of individual industries. Regulations based on consensus-based standards are much less likely to be arbitrary or user-unfriendly.

Now private sector standards are increasingly being used to replace milspecs as the Department of Defense buys more of what it needs from the private sector, which means that government engineers must be involved in standards writing to guarantee that consensus standards meet military as well as civilian needs.

Standards development is voluntary but not free. The ANSI portion of the process is underfunded despite a budget of over \$10,000,000. Despite the large benefits to the government from the voluntary standards process, federal agencies are noticeably absent in their direct support of ANSI.

Many ANSI company and organizational members are very vocal in expressing their belief that the federal government should pay its "fair share" of supporting ANSI. The reason for their concern is clear: All federal agencies combined pay less than \$30,000 in ANSI dues, yet they hold approximately 14% of the seats on the ANSI board of directors and are active at every level of ANSI governance and throughout the Institute's activities. In contrast, some individual companies pay twice as much as the entire federal government in dues, yet hold only a single seat on the board of directors, have a far more limited level of participation in the Institute's activities and governance, and realize far fewer benefits from ANST's activities than many government agencies.

We believe that this imbalance is not only unfair, but is detrimental to the national interest. If the United States is to have a strong voice in international standards fora, the federal government should be a full participant in the ANSI federation in every sense, including financial.

Mr. Mazza's responses

Page 2

We suggest a straightforward approach to the question of government's payment of a "fair share" to support ANSI. We suggest that the federal government raise its share to an amount approximately equivalent to the federal role in the governance of ANSI, and that Congress provide these funds in its appropriation to the National Institute of Standards and Technology, which has the federal lead role in standards, or through a revised dues structure for federal agencies. If the government, for instance, chose to contribute to ANSI an amount proportional to its representation on ANSI's board of directors, this would provide a badly needed financial boost to ANSI and recognize the government's stake in the success of that program. The contribution would be at a level similar to that paid by other countries in support of their member bodies to the ISO and IEC, yet small enough to preserve ANSI's industry led nature.

At ANSI, we believe that the most effective form of government support is through active government participation in the voluntary standards system, not only in technical committees but also in policy committees and in ANSI-sponsored U.S. delegations to international fora. We know from experience that the U.S. position in international fora is strengthened by the presence of federal government representatives in the U.S. delegation, and we urge greater participation by federal agencies in these activities. Strong federal participation should be actively and consistently supported by all levels of the federal government, by budgetary commitment as well as policy statements.

OMB Circular A-119 states clearly that federal employees are to play an active role within the U.S. voluntary standards system; we welcome the recent revisions to the Circular which strengthen this policy. In practice, however, we find that the policy often is misunderstood or ignored at the levels at which budget decisions are made. As a result, the U.S. government's interests often are not represented at meetings in which significant decisions are made affecting U.S. competitiveness, procurements, or regulatory issues. A strong statement from this Committee, or from the Congress as a whole, in support of the policies expressed in OMB Circular A-119 would greatly strengthen the use of the Circular.

2. Are you aware of any regulatory impediments that prevent the full participation of government agencies in the National Voluntary System? In the same spirit, are there any specific government agencies or institutions that you would like to have cooperate more fully with you in the standards area? If so, what solutions would you propose?

The primary barrier to federal participation in the voluntary consensus standards system is lack of resources. Senior management within government agencies often fail to understand how critical the voluntary standards activities are to the agency's mission, U.S. competitiveness, and long-term budget reductions. In these times of increasingly limited budgets, this lack of understanding translates into lack of consistent budgetary support from senior management for federal employees' participation in domestic and international standardization activities. In the long run, these short-term savings

Mr. Mazza's responses  
Page 3

adversely affect the government's ability to effect savings by being able to purchase commercially available goods and services, based on consensus standards for government needs rather than custom products based on government specifications, and by reducing the cost of regulations through building on industry consensus standards.

In some instances, agencies narrowly interpret their mission to be either "health and safety" or "trade promotion," without allowing for the possibility that both purposes can be advanced by full participation in standards work internationally.

A continuing difficulty encountered by standards developers is that government agencies [such as the Environmental Protection Agency] sometimes develop their own standards even though nearly identical work is already underway in the private sector—sometimes with the participation of representatives from those agencies. This is done at great cost, not only in terms of federal dollars wasted, but also in terms of the government not benefitting from the latest technology and expertise available in the private sector.

We are not aware of any regulatory impediments that prevent the full participation of government agencies in the ANSI federation.

ISBN 0-16-046854-X







